

**PACIFIC SALMON COMMISSION JOINT  
TRANSBOUNDARY TECHNICAL COMMITTEE**

**ESTIMATES OF TRANSBOUNDARY RIVER SALMON  
PRODUCTION, HARVEST AND ESCAPEMENT  
AND A REVIEW OF JOINT  
ENHANCEMENT ACTIVITIES IN 2004**

**REPORT TCTR (13)-3**

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## ACRONYMS

ADF&G	Alaska Department of Fish and Game
AF	Aboriginal Fishery
CAFN	Champagne-Aishihik First Nation
CPUE	Catch per unit effort
CWT	Coded Wire Tag
DFO	Department of Fisheries and Oceans (Canada)
DIPAC	Douglas Island Pink and Chum (Private Hatchery)
ESSR	Excess Salmon to Spawning Requirement (surplus fishery license)
IHN	Infectious Hematopoietic Necrosis (a virus which infects sockeye salmon)
LCM	Latent Class Model
MEF	Mid-Eye-Fork (fish length measurement)
POH	Post-Obital-Hyperal (fish length measurement)
PSC	Pacific Salmon Commission
SMM	Stikine Management Model
SPA	Scale Pattern Analysis
TAC	Total Allowable Catch
TRTFN	Taku River Tlingit First Nation
TBR	Transboundary River
TTC	Transboundary Technical Committee
YSC	Yukon Salmon Committee



# Calendar of Statistical Weeks for 2004

Week	From	Through	Week	From	Through
1	1-Jan	3-Jan	28	4-Jul	10-Jul
2	4-Jan	10-Jan	29	11-Jul	17-Jul
3	11-Jan	17-Jan	30	18-Jul	24-Jul
4	18-Jan	24-Jan	31	25-Jul	31-Jul
5	25-Jan	31-Jan	32	1-Aug	7-Aug
6	1-Feb	7-Feb	33	8-Aug	14-Aug
7	8-Feb	14-Feb	34	15-Aug	21-Aug
8	15-Feb	21-Feb	35	22-Aug	28-Aug
9	22-Feb	28-Feb	36	29-Aug	4-Sep
10	29-Feb	6-Mar	37	5-Sep	11-Sep
11	7-Mar	13-Mar	38	12-Sep	18-Sep
12	14-Mar	20-Mar	39	19-Sep	25-Sep
13	21-Mar	27-Mar	40	26-Sep	2-Oct
14	28-Mar	3-Apr	41	3-Oct	9-Oct
15	4-Apr	10-Apr	42	10-Oct	16-Oct
16	11-Apr	17-Apr	43	17-Oct	23-Oct
17	18-Apr	24-Apr	44	24-Oct	30-Oct
18	25-Apr	1-May	45	31-Oct	6-Nov
19	2-May	8-May	46	7-Nov	13-Nov
20	9-May	15-May	47	14-Nov	20-Nov
21	16-May	22-May	48	21-Nov	27-Nov
22	23-May	29-May	49	28-Nov	4-Dec
23	30-May	5-Jun	50	5-Dec	11-Dec
24	6-Jun	12-Jun	51	12-Dec	18-Dec
25	13-Jun	19-Jun	52	19-Dec	25-Dec
26	20-Jun	26-Jun	53	26-Dec	31-Dec
27	27-Jun	3-Jul			



## EXECUTIVE SUMMARY

Postseason final estimates of catches and escapements of Pacific salmon returning to the transboundary Stikine, Taku, and Alsek Rivers for 2004 were presented and compared with historical patterns. Average, unless stated differently, refers to the 1994-2003 averages. Relevant information pertaining to the management of appropriate U.S. and Canadian fisheries is presented and the use of inseason management models is discussed. Results from transboundary river sockeye salmon *Oncorhynchus nerka* enhancement projects are also reviewed.

### *Stikine River*

The 2004 Stikine River sockeye salmon run was estimated at 310,000 fish, of which approximately 211,000 fish were harvested in various fisheries including test fisheries. An estimated 99,000 Stikine River fish escaped to spawn, including 300 fish that migrated to the Tuya River block that were not harvested. The run and harvest were above average. The Tahltan Lake sockeye salmon escapement of 63,000 was above the upper bound of the goal range (18,000 to 30,000 fish). The estimated U.S. commercial catch of Stikine River sockeye salmon in Districts 106 and 108 was 112,000 fish and the Canadian inriver commercial, aboriginal, and excess salmon to spawning requirement (ESSR) fishery catches combined were 86,000 fish. The inriver test fishery harvested 1,300 sockeye salmon and there was no marine test fishery in 2004. The Stikine Management Model (SMM) predicted a run greater than the preseason forecast after week 30. Weekly inseason model forecasts ranged from 160,000 to 308,000 sockeye salmon; the final inseason model prediction was 299,000 fish (both U.S. and Canada), with a total allowable catch (TAC) of 242,000 fish. Based on the postseason run size estimates and TAC calculations of 96,000 Stikine River fish for each country, Canada harvested 65% and the U.S. harvested 95% of their respective TACs. The broodstock collection and otolith sampling removed 4,200 and 400 sockeye salmon respectively from the escapement to Tahltan Lake leaving a spawning escapement of 58,700 fish. The estimated spawning escapement of 36,000 mainstem Stikine River sockeye salmon was within the goal of 20,000 to 40,000 fish for this stock group. The total sockeye salmon run calculated from mark-recapture study was 208,000 sockeye salmon, approximately 10% greater than the estimate generated from the test fishery CPUE.

The harvest of Chinook salmon *O.tshawytscha* in Canadian commercial and aboriginal fisheries in the Stikine River was 3,900 large fish and 2,600 non large fish; both above average. An additional 50 large and 80 non large Chinook salmon were taken in the Canadian inriver test fishery. The U.S. marine harvest of Chinook salmon (all stocks) in the District 106 and 108 mixed stock gillnet fisheries of 10,100 fish was above average. The Chinook salmon spawning escapement of 16,400 large adults through the Little Tahltan River weir was twice the upper bound of the escapement goal range of 2,700 to 5,300 fish and the highest on record. The total Stikine River Chinook salmon escapement as estimated from a mark-recapture study was 49,000 fish.

As with Chinook salmon, the U.S. marine harvest of Stikine River coho salmon *O. kisutch* is unknown since there is no stock identification program for this species. Mixed stock coho harvests in Districts 106 and 108 were 136,400 and 26,400 fish, respectively; above average. Alaskan hatchery fish comprised approximately 36% and 9% of the harvest in Districts 106 and 108, respectively. The Canadian inriver coho catch of 300 fish was 25% of average. The aerial survey count from six index sites of 3,000 fish was 75% of average.

### ***Taku River***

The postseason estimate of the 2004 Taku River sockeye salmon run was 204,015 fish, including an estimated catch of 98,000 fish and an above-border spawning escapement of 107,000 sockeye salmon. The run size was below average and the escapement was above the escapement goal range of 71,000 to 80,000 fish. An estimated 77,000 Taku River sockeye salmon were harvested in the District 111 commercial fishery; below average, and an estimated 1,000 sockeye salmon were harvested in the U.S. inriver personal use fishery. Canadian inriver commercial harvested 20,200 sockeye salmon and aboriginal fishery harvest 100 sockeye salmon. The commercial harvest was below average. In 2004, Canada harvested an estimated 16%, and the U.S. harvested 60% of the TAC.

The harvest of large Chinook salmon in the Canadian commercial fishery in the Taku River was 2,100 fish; above average. In addition, 300 non large Chinook salmon were harvested; above average. The Canadian aboriginal fishery in the Taku River harvested 500 large Chinook salmon. District 111 mixed stock gillnet fishery harvest of 2,300 Chinook salmon was average. Approximately 21% of the harvest was estimated to be of Alaska hatchery origin. The escapement of 9,100 Chinook salmon counted in Taku River index areas was average, and was in the revised index escapement goal range of 5,800 to 10,500 fish. The above-border mark-recapture estimate for Chinook salmon is 78,000 fish.

The estimated above border run of Taku River coho salmon in 2004 was 144,000 fish, which was above average. The Canadian inriver commercial harvest included 6,000 coho salmon; average. After upriver Canadian harvest are subtracted from the inriver run, the above-border spawning escapement was estimated at 134,500 coho salmon, which exceeds the minimum escapement goal of 38,000 fish. The U.S. harvest of 45,300 coho salmon in the District 111 mixed stock fishery was 1 average. Alaskan hatcheries contributed an estimated 6% of the District 111 harvest, or 2,600 fish.

The harvest of 150,400 pink salmon *O. gorbuscha* in District 111 was above average. Pink salmon were not retained in the Canadian commercial inriver fishery in 2004. The Taku River pink escapement was likely below above average, as evidenced by the fish wheel catch and release of 8,500 which was below average.

The catch of chum salmon *O. keta* in the District 111 fishery was 131,500 fish, and was composed of 126,000 summer run fish (prior to mid-August) and 5,400 fall run fish. The harvest of summer chum salmon, primarily Alaskan hatchery stocks, was below average.

The harvest of fall chum salmon, composed of wild Taku River and Port Snettisham stocks, was average. As with pink salmon, there was non-retention of chum salmon in the Canadian inriver fishery and the reported catch was 0 fish in 2004. Although spawning escapement is not known the Canyon Island fish wheel catch of 400 chum salmon was above average.

### *Alsek River*

The Alsek River sockeye salmon harvest of 18,000 fish in the U.S. commercial fishery was average. The Canadian inriver harvest of 2,100 fish was above average harvest. The Klukshu River weir count of 15,400 sockeye salmon was average and just above the goal-range of 7,500 to 15,000 fish. The count of 3,500 early run sockeye salmon (count through August 15) was above average. The late run count of 11,900 fish was average. The mark-recapture program indicated an Alsek River sockeye salmon run above Dry Bay of 70,200 fish with the Klukshu stocks representing 22% of the total Alsek River run.

The Chinook salmon run to the Alsek River appeared to be near average. The U.S. Dry Bay catch of 660 Chinook salmon was average. The combined Canadian sport and aboriginal fishery catch of 190 Chinook salmon was below average. The 2,500 Chinook salmon counted through the Klukshu River weir was average. Of the total count, 2,500 Chinook salmon were estimated to have spawned, over the goal range of 1,100 to 2,300 Chinook salmon. The mark-recapture estimate of the spawning escapement of large fish in the Alsek River was 7,565 large Chinook salmon (Appendix E. 11).

Current stock assessment programs prevent an accurate comparison of the Alsek River coho salmon run with historical runs. The U.S. Dry Bay catch of 2,550 coho salmon was below average, while the combined Canadian inriver aboriginal and sport fishery catch of 130 fish was average. The operation of the Klukshu weir does not provide a complete enumeration of coho salmon into this system since it was removed before the run was over; however, it does provide an annual index. The count of 7,500 coho salmon was below average.

### *Enhancement*

Eggs and milt were collected from the year 2004 sockeye salmon escapements at Tahltan and Tatsamenie Lakes. A total of 6.1 million eggs were collected at Tahltan Lake. At Tatsamenie Lake, 2.6 million eggs were collected for the hatchery.

Outplants of 2003 brood-year sockeye salmon fry in May and June 2004 included, 2.2 million fry into Tahltan Lake, 2.4 million fry into Tuya Lake, and 2.1 million fry into Tatsamenie Lake. Green-egg to planted-fry survivals were 84%, 90%, and 87% for the Tahltan, Tuya and Tatsamenie outplants, respectively. Survival to emergence were above average.

The egg incubation and thermal-marking program was continued at Snettisham Hatchery in 2004. Snettisham hatchery is operated by DIPAC (Douglas Island Pink and Chum, Inc.), a private aquaculture organization in Juneau. A co-operative agreement between ADF&G and DIPAC provides for Snettisham hatchery to serve the needs of the joint TBR enhancement projects.

Adult sockeye salmon otoliths were processed inseason by the ADF&G otolith lab to estimate the weekly contribution of fish from US/Canada TBR fry planting programs to the District 106, 108, and 111 gillnet fisheries and to Canadian commercial fisheries in the Stikine and Taku Rivers. Final contribution estimates of planted fish to Alaskan harvest were 42,900 planted Stikine River fish to District 106 and 108, (19% of that catch) and 700 planted Taku River fish to District 111 (<1% of that harvest). Final estimates of contributions to Canadian fisheries included 23,700 planted fish to Stikine River fisheries (31% of that catch) and 300 planted fish to the Taku River fisheries (<1% of that catch).



## INTRODUCTION

This report presents the final estimates of the 2004 catch and escapement data for Pacific salmon runs to the transboundary Stikine, Taku, and Alsek Rivers and discusses management actions taken during the season. Catch and effort data for each river for both U.S. and Canadian fisheries are presented by management week (also called statistical week; statistical weeks for 2004 are listed on page ii, before table of contents). Spawning escapement data for most species are reported from weir counts or other escapement monitoring techniques. Joint enhancement activities on the Stikine and Taku Rivers are also summarized.

The Transboundary Technical Committee (TTC) met prior to the season to update joint management, stock assessment and enhancement plans and determine preseason forecasts and outlooks for run strengths and initial total allowable catch TAC estimates for the various species and rivers. The results of this meeting are summarized in: Pacific Salmon Commission Transboundary Technical Committee, 2004. *Salmon Management and Enhancement Plans for the Stikine, Taku and Alsek Rivers, 2004*.

Run reconstruction analyses are conducted on the sockeye salmon *Oncorhynchus nerka* runs to the three rivers for the purpose of evaluating the stocks and the fisheries managed for these stocks. No estimates of marine catch are made for Alaskan fisheries outside of District 106 and 108 for Stikine River stocks, District 111 for Taku River stocks and Subdistrict 182-30 and -31 for Alsek River stocks.

## STIKINE RIVER

Stikine River salmon are harvested by U.S. commercial gillnet fisheries in Alaskan Districts 106 and 108, by Canadian commercial gillnet fisheries located in the lower and upper Stikine River, and by a Canadian aboriginal fishery in the upper portion of the river (Figure 1). In addition, Canadian terminal area fisheries are operated in the lower Tuya River and/or at Tahltan Lake when escapements are estimated to include excess salmon to spawning requirements (ESSR). A small sport fishery also exists in the Canadian sections of the Stikine River drainage. In 1995, a United States personal use fishery was established in the lower Stikine River; no catches were reported in this fishery in 1995 through 2000, approximately 30 sockeye salmon were harvested in 2001, and the personal use fishery on the Stikine River was not open in 2002 and 2003. A subsistence fishery was opened in 2004. Additional catches of unknown quantity are taken in U.S. troll and seine fisheries and in sport fisheries near Wrangell and Petersburg. In 1996, the spring experimental troll area in the District 110 portion of Frederick Sound was expanded to target hatchery Chinook salmon (*O. tshawytscha*); four previous areas were combined into one large area that also included previously unopened waters. This area was the same in 2003. In 1993 the spring experimental troll fishery near Wrangell was expanded to include 2 new areas in portions of District 106 and 108 to target hatchery Chinook salmon. In 1998 an additional area was included in a portion of District 108. In 2002 this area was excluded and another small portion of District 108 was included in the experimental fishery. In 2003, the new area included in 2002 was excluded.



### ***Harvest Regulations and the Joint Management Model***

Negotiations between Canada and the United States to replace expired portions of Annex IV, Chapter 1 of the Pacific Salmon Treaty resulted in the following arrangements for Stikine River salmon which are expected to be in place for the 1999 to 2008 period:

1. General:

The Parties shall improve procedures for coordinated or cooperative management of the fisheries on transboundary river stocks. To this end, the Parties affirm their intent to develop and implement abundance-based management regimes for transboundary Chinook salmon, sockeye salmon, and coho salmon (*O. kisutch*), no later than May 1, 2004.

2. Sockeye salmon:

(i) Assessment of the annual run of Stikine River sockeye salmon shall be made as follows:

- a. a preseason forecast of the Stikine River sockeye salmon run will be made by the Committee prior to April 1 of each year. This forecast may be modified by the Committee prior to the opening of the fishing season;
- b. inseason estimates of the Stikine River sockeye salmon run and the Total Allowable Catch (TAC) shall be made under the guidelines of an agreed Stikine Management Plan and using a forecast model developed by the Committee. Both U.S. and Canadian fishing patterns shall be based on current weekly estimates of the TAC. At the beginning of the season and up to an agreed date, the weekly estimates of the TAC shall be determined from the pre-season forecast of the run strength. After that date, the TAC shall be determined from the inseason forecast model;

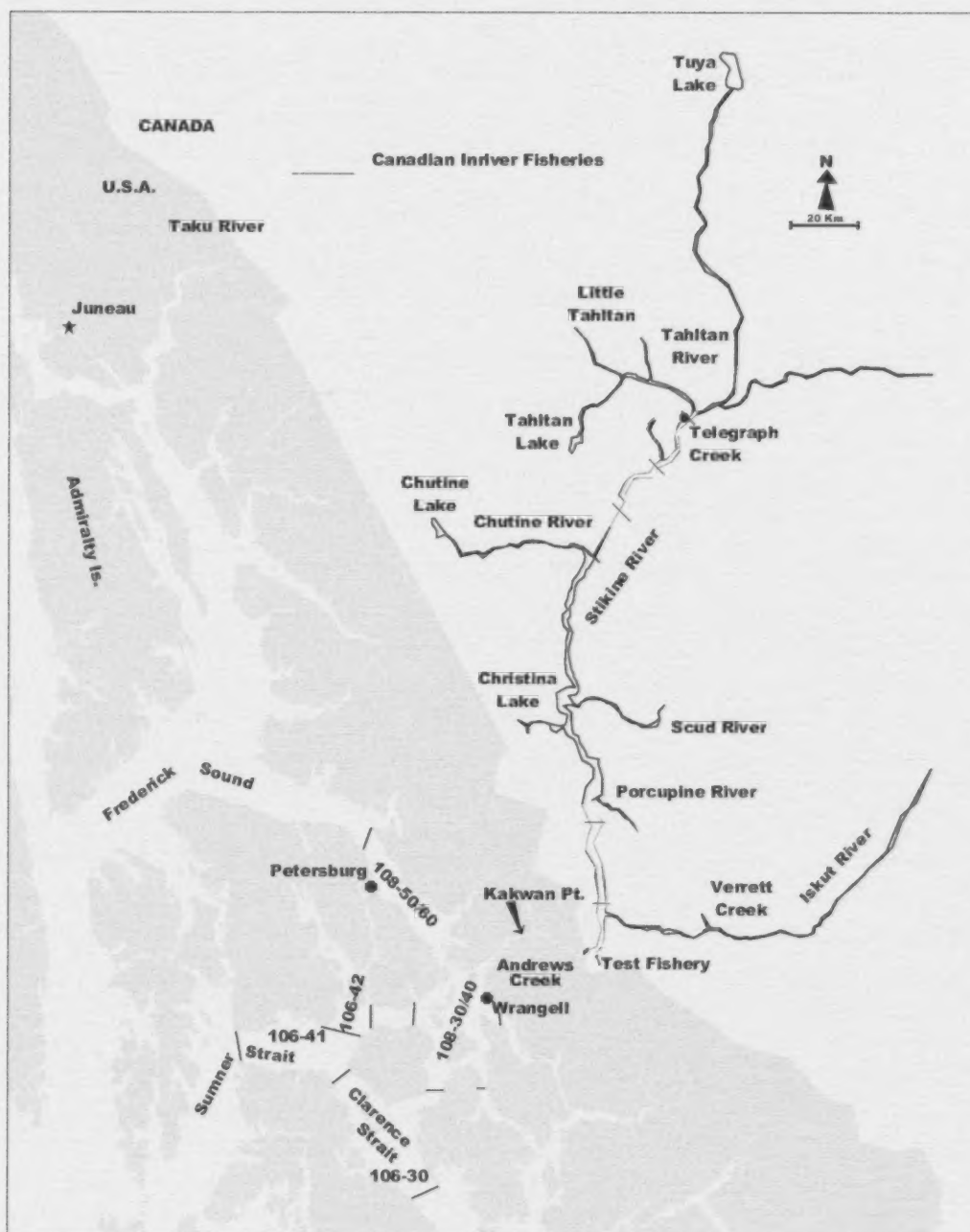


Figure 1. The Stikine River and principal U.S. and Canadian fishing areas.

- c. modifications to the Stikine Management Plan and forecast model may be made prior to June 1 of each year by agreement of both Parties. Failure to reach agreement in modifications shall result in use of the model and parameters used in the previous year; and,
  - d. estimates of the TAC may be adjusted inseason only by concurrence of both Parties' respective managers. Reasons for such adjustments must be provided to the Committee.
- (ii) The Parties desire to maximize the harvest of planted Tahltan/Tuya sockeye salmon in their existing fisheries while considering the conservation needs of wild salmon runs. The Parties agree to manage the runs of Stikine River sockeye salmon to ensure that each country obtains 50% of the TAC in their existing fisheries. Canada will endeavor to harvest all fish surplus to escapement and broodstock needs returning to the Tuya and Tahltan Lake systems.
  - (iii) The Parties agree to continue the existing joint enhancement programs designed to produce annually 100,000 returning sockeye salmon.
- (2) Coho salmon:
- (i) Consistent with paragraph 1 above, the Parties agree to develop and implement an abundance-based approach to managing coho salmon on the Stikine River. Assessment programs need to be further developed before a MSY escapement goal can be established.
  - (ii) In the interim, the United States' management intent is to ensure that sufficient coho salmon enter the Canadian section of the Stikine River to meet the agreed spawning objective, plus an annual Canadian catch of 4,000 coho salmon in a directed coho salmon fishery.
- (3) Chinook salmon:
- (i) Both Parties shall take the appropriate management action to ensure that the necessary escapement goals for Chinook salmon bound for the Canadian portions of the Stikine River are achieved.
  - (ii) The Parties agree that new fisheries on Stikine River Chinook salmon will not be developed without the consent of both Parties. Consistent with paragraph 2, management of new directed fisheries will be abundance-based through an approach to be developed by the Committee. The Parties agree to implement assessment programs in support of the development of an abundance-based management regime.
  - (iii) The Parties shall review an appropriate MSY escapement goal for Stikine River Chinook salmon by May 1999 and establish a new goal as soon as practicable thereafter.

As in most previous years, the Transboundary Technical Committee (TTC) met prior to the season to update joint management and enhancement plans, develop run forecasts and determine new parameters for input into the inseason run forecast model, referred to as

the Stikine Management Model (SMM). The model was upgraded to provide inseason forecasts of the total Stikine River sockeye salmon run as well as the following components of the run: the Tahltan stock (wild and planted combined); the planted Tuya stock; and the mainstem stocks. The model for 2004 was based on catch per unit effort (CPUE) data from 1985 to 2003 from District 106 and the Canadian commercial fishery in the lower river and from 1986 to 2003 from the lower Stikine River test fishery. Linear regression was used to predict run size from cumulative CPUE for each (statistical) week of the fisheries, beginning in week 25 for District 106 and week 26 for the inriver fisheries. As in 1999 to 2003, the intercept was forced to be zero in order to correct for a tendency to overestimate the run size in the early weeks during years of low abundance. Each CPUE and run size data set is significantly correlated.

Initially in 2004 the inriver test fishery CPUE was the primary forecast used however, the CPUE from the commercial fishery was used after week 27 (extended fishery openings provided more data than the limited or absent test fishery). Calculations for the lower Stikine River commercial CPUE excluded catch and effort data from the Flood Glacier area, i.e., the new area introduced in 1997 and fished through the 2000 season and again opened in 2004. In addition, the annual weekly CPUE values for 1994 through 2000 were decreased by a factor of 0.75 for the extra gear allowed in the commercial fishery during that period. This made the historical CPUE data for that period more comparable with the 2004 fishing season and the pre-1994 era.

In 2004, the preseason forecasts were used during weeks 25 (June 20 to 26) through 26 (June 27 to July 03). A combination of preseason forecast and test fishery CPUE were used for week 27 (July 04 to July 10). After week 27, inseason forecasts of total run size and TAC, produced by the SMM and based on catch-per-unit-effort (CPUE) data, were used to assist in determining weekly fishing plans (Table 1). The weekly inputs to the model included: the catch, effort and stock composition (proportion Tahltan/Tuya from egg diameters, proportion planted Tuya from thermal mark analyses of otoliths) in the Canadian lower river test and commercial fisheries; the upper river catch in the aboriginal fishery (AF) and upper river commercial fishery; the catch, effort and assumed stock composition in Subdistrict 106-41 (Sumner Strait); and, the catch and assumed stock composition in District 108 and Subdistrict 106-30 (Clarence Strait). Preliminary results of thermal mark analyses were available inseason for the marine and lower river fisheries to account for Tuya production in the model and reduce the risk of over-estimating the TAC of Tahltan sockeye salmon.



**Table 1.** Weekly forecasts of run size and total allowable catch for Stikine River sockeye salmon as estimated inseason by the Stikine Management Model, 2004.

Stat. Week	Start Date	Forecast Run Size	TAC			Cumulative Catches <sup>a</sup>		
			Total	U.S.	Canada	U.S.	Canada	
Model runs generated by Canada								
	26	20-Jun	232,717	174,608	87,304	87,304	292	
	27	27-Jun	232,717	174,608	87,304	87,304	5,485	
	28	4-Jul	267,851	211,853	105,927	105,927	29,952	
	29	11-Jul	207,986	152,173	76,087	76,087	54,856	
	30	18-Jul	250,769	207,056	103,528	103,528	66,357	
	31	25-Jul	258,838	215,075	107,538	107,538	75,316	
	32	1-Aug	284,346	228,857	114,429	114,429	82,102	
	33	8-Aug	297,900	242,462	121,231	121,231	84,601	
	34	15-Aug	308,900	253,480	126,740	126,740	84,886	
Model runs generated by the U.S.								
	25	20-Jun	232,717	172,595	86,297	86,297	739	0
	26	27-Jun	232,717	172,595	86,297	86,297	10,467	281
	27	4-Jul	232,717	123,108	61,554	61,554	28,789	5,447
	28	11-Jul	160,062	101,201	50,600	50,600	65,778	24,663
	29	18-Jul	207,986	150,279	75,140	75,140	77,692	45,277
	30	25-Jul	192,183	166,939	83,470	83,470	107,843	61,979
	31	1-Aug	257,910	211,232	105,616	105,616	109,913	68,796
	32	8-Aug	283,690	226,432	113,216	113,216	111,468	75,662
	33	15-Aug	298,746	241,452	120,726	120,726		
Postseason estimate (from Table 2).								
			310,334	254,011	127,055	127,055		

<sup>a</sup> does not include test fishery catches

Initially, average stock proportions in District 106 and 108 catches, from historical postseason scale pattern analysis (SPA), were assumed for weekly catches; the averages used each week depended upon whether the run was judged to be below average, average, or above average. The Tuya and planted Tahltan stock proportions were subsequently adjusted inseason based on the analysis of otolith samples taken in Districts 106 and 108. Inseason otolith sampling was conducted to estimate the contribution of planted Tahltan and Tuya Lake sockeye salmon to catches in these areas. The weekly estimate of Tuya fish in District 106-41 and -108 was added to the historical proportion of Tahltan fish in the SMM since this stock was not present in the historical database.

The preseason forecast for the Stikine River sockeye salmon run was approximately 233,000 fish (Table 1), which indicated a run size about 50,000 fish greater than the average run (Appendix B.28). The forecast included approximately 102,100 natural Tahltan sockeye salmon (44%), 58,700 planted Tahltan fish (25%), 27,500 planted Tuya sockeye salmon (11%), and 44,400 mainstem fish (19%). Canadian inseason predictions of total run ranged from 208,000 to 308,900 sockeye salmon; U.S. forecasts ranged from 160,000 to 298,7 sockeye salmon (Table 1). All forecasts indicated an above average run. Even though run size generated from the inriver test fishery data has proven more accurate than that generated from the commercial fishery data in past years, the limited duration of the test fishery forced use of the commercial fishery data 2004. Differences in



U.S. and Canadian weekly predictions are due only to different catch data inputs being used for the updates.

The final postseason estimates of run size and TAC are larger than those used inseason for management. The inseason forecast tended to underpredict the run during the peak weeks of the fishery, in part, due to evidently delayed migratory timing. The inseason forecasts increased throughout the duration of the run and by the end of the fishery were within 3000 fish of the postseason estimate (Table 1).

### *U.S. Fisheries*

The 2004 gillnet harvest in District 106 included 2,735 Chinook salmon, 116,259 sockeye salmon, 138,631 coho salmon, 245,237 pink salmon, and 110,574 chum salmon (Appendix A.1 and B.1). The harvests of all salmon species except Chinook salmon were below average (Figure 2 Appendix B.1). The District 106 total harvest of Chinook salmon was the highest on record. The final postseason estimate of the contribution of Stikine River sockeye salmon to the District 106 total sockeye salmon harvest was 33,000 fish or 28.3% of the harvest (Appendix A.2 and B.2). Second year returns of sockeye salmon to Neck Lake contributed an estimated 3,251 (2.8%) to the District 106 fishery. An estimated 1,281 Chinook salmon in the District 106 harvest (46.8%) were of Alaska hatchery origin (Appendix A.1). An estimated 49,500 coho salmon were of Alaska hatchery origin, 35.7% of the total coho salmon harvest. The District 106 drift gillnet fishery was open for 55 days from June 13 through October 5 (Appendix A.1 and B.1). This was above average fishing time of 44.3 days. Sections 6-A, 6-B, and 6-C were open simultaneously each week throughout the season. Fishing effort in number of vessels fishing in District 106 was below average for the most of the season (Appendix B.1). The greatest effort in vessels fishing, 83 boats, occurred in week 37. However, the greatest effort in boat days (280) occurred near the beginning of the season in week 27 (Appendix A.1). The total season effort was 2,735 boat days, below average (Appendix B.1).

The Sumner Strait fishery (Subdistricts 106-41 and -42) harvested an estimated 31,000 Stikine River sockeye salmon (Appendix A.4 and B.4), 36.1% of the total sockeye salmon harvest in that subdistrict. The Clarence Strait fishery (Subdistrict 106-30) harvested and estimated 2,000 Stikine River sockeye salmon (Appendix A.6 and B.6), 6.5% of the total sockeye salmon harvest in that subdistrict.

In District 108, 7,410 Chinook salmon; 103,392 sockeye salmon, 26,617 coho salmon, 20,439 pink salmon, and 37,996 chum salmon were harvested for the season (Appendix A.7 and B.7). The total harvest of Chinook salmon was the 4<sup>th</sup> highest on record and the highest since 1974. Total sockeye harvest was above average. The District 108 fishery harvested an estimated 81,000 Stikine River sockeye salmon (Appendix A.8 and B.8), 78.3% of the District 108 sockeye salmon harvest (Figure 3). District 108 started concurrently with the District 106 fishery on June 13th and ran through October 5. The 53 days the district was open was above average despite being closed for 2 consecutive weeks at the end of July (Appendix A.7 and B.7). District 108 was open for at least three days a week with the exception of weeks 31 and 32 when it was closed due to concern for

the Stikine River mainstem sockeye run. An estimated 9.2% of the coho salmon harvest (2,447 fish) was of Alaskan hatchery origin (Appendix A.7). The fishing effort in number of vessels fishing in District 108 was at or above average for most openings. The season effort of 1,824 boat-days in District 108 was above average boat-days (Appendix B.7).

The District 108 test fishery did not take place in 2004 (Appendix A.9). Annual harvests and stock compositions from 1960 to 2000 for District 6 and 8 test fisheries are provided in Appendices B.9-B.11.

The 2004 season was the first season a U.S. Federal subsistence fishery was conducted on the Stikine River. The fishery was managed by the United States Forest Service. A permit issued by the USFS to Federally qualified users was required. The fishery took place on the Stikine River upriver from marine waters to the U.S./Canadian border. Fishing in "clearwater" tributaries or side channels and at stock assessment sites was prohibited. A 600 sockeye salmon Guideline Harvest Level was in place. The open dates for the fishery were July 1 to July 31. The allowable fishing gear for the fishery was dipnets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length with mesh size no larger than 5½ inches. A total of 40 permits were issued but only 20 actively fished. Of those 20 that fished, 15 landed a total of 243 sockeye.

Harvests in Districts 106 and 108 consist of species of mixed stock origin; the contribution of Stikine River stocks is estimated only for sockeye salmon. The proportions of Stikine River sockeye salmon in the District 106 and 108 harvest were estimated inseason using both the historical proportions of each stock and the inseason proportions of thermally marked fish from fry plants to Tahltan and Tuya Lakes.

The District 106 and 108 gillnet season began 12:00 noon on Sunday, June 13 (statistical week 25) for a 72 hour period. District 108 was open to the inner Stikine closure line from Point Rothsay to Indian Point and with a closure around the northern entrance to Wrangell Narrows. This opening is normally 2 days and any decision to extend fishing is based on fishery harvest rates estimated by management biologists on site in the fishery. However, an initial three days was given due to the large forecast of Tahltan sockeye salmon and a lack of conservation concern for Stikine Chinook salmon. The estimated sockeye salmon CPUE in both districts for statistical week 25 was below average for this week (Appendix A.2). However, the fishery was open in week 25 in only six years in District 106 and four years in District 108 during the 1994 to 2003 period. There were 16 boats fishing in Sumner Strait (106-41) and no boats were fishing in Clarence Strait (106-30) during this opening. District 108 had an above average number of boats fishing with 31 boats making landings. (Appendices A.3 and A.5). The inseason otolith readings for District 106 indicated that the harvest in Sumner Strait consisted of 7% marked Tahltan bound fish) and only 1.9% of Tuya fish. The District 108 fishery had a higher proportion of marked Tahltan (16.7%) and Tuya (3.6%). The preseason SMM forecasted a total Stikine River TAC of 172,595 fish and a Tahltan TAC of 135,547 (Table 2). This would allow the U.S. fisheries to harvest a total of 86,297 Stikine River fish, including 67,774 Tahltan fish. The pre-season forecast was used for weeks 25 to 27, the inriver test fishery CPUE for week 28 and the lower river commercial fishery CPUE was used for the

remainder of the sockeye salmon season. Normally, the inriver test fishery CPUE data is used for the remainder of the season after week 27 but the test fishery was not conducted for 2 weeks (28 and 29) during the peak of the sockeye run when the lower river commercial fishery was open for seven days a week. The lower river commercial CPUE continued to be used after the test fishery started again because of reduced drifts in the test fishery and the consistency of the lower river commercial CPUE data.

During statistical week 26 (June 20 to June 26) there were 31 boats fishing in Sumner Strait, 2 boats fishing in Clarence Strait and 28 boats in District 8 for the initial 3 days (Appendices A.3 and A.5). The sockeye salmon CPUE in both districts was well above average for this week. District 108 was open for an additional 2 day midweek opening. An additional 27 boats made landings in the midweek opening making a total of 55 boats fishing in the district for the week. However, there was no fishery extension in District 106.

During week 26 (June 22 to June 28) there were 36 boats fishing in Sumner Strait and 9 boats fishing in Clarence Strait (Appendices A.3 and A.5). The sockeye salmon CPUE in District 106 was above the 1993 to 2002 average for this week however there was no fishery extension in District 106 and District 108 remained closed.

During week 27 (June 27 to July 3), there were 46 boats fishing in Sumner Strait, 10 boats fishing in Clarence Strait and 48 boats fishing in District 108 (Appendices A.3 and A.5). Due to the uniformly very good sockeye catch rates indicated by the in-fishery survey in both districts a 2-day extension in both districts occurred bringing the total open time to 5 days. The District 106 sockeye salmon harvest and CPUE were substantially above the respective 1994 to 2003 averages. The District 108 CPUE was above average and the total harvest for the week was just below average. This week the SMM switched from the preseason forecast to a forecast based on the Canadian inriver test fishery CPUE for the week 28 projections (Table 1). The inseason otolith readings for sub-district 106-41 for week 27 indicated that 19.4% and 5.2% of the catch was comprised of thermally marked Tahltan and Tuya fish, respectively. The District 108 reading indicated 34.1% thermally marked Tahltan and 5.2% thermally marked Tuya. The estimated U.S. harvest by the end of this week was 25,519 Tahltan sockeye salmon, while the SMM projected a U.S. TAC of 37,313 Tahltan sockeye salmon.

During week 28 (July 4 to July 10) District 106 and 108 were opened for an initial three days (Appendix A.7). There were 67 boats fishing in District 106 (21 in Clarence Strait and 46 in Sumner Strait) and a total of 83 boats fishing in District 108 for the week (Appendices A.3, A.5, and A.7). Surveys on the fishing grounds showed that the CPUE for the three-day opening was above average in both districts. A 2-day midweek opening occurred in District 108. On average, the peak Tahltan abundance occurs in District 106 in week 27; however, the 2004 statistical weeks were earlier than average, therefore week 28 was similar to the week 29 historical averages when the majority of the Tahltan run has passed through the District 106 fishery. The estimated U.S. harvest of Tahltan sockeye salmon in District 108 was 34,875 fish and 20,563 in District 106 making a total U.S. harvest of Tahltan sockeye salmon of 55,438 fish through week 28. The TAC from



the SMM was 66,658 Tahltan sockeye salmon. While the SMM forecast of Talhtan sockeye run increased this week to near the pre-season forecast, the forecast of the mainstem run decreased significantly to below preseason forecast.

During week 29 (July 11 to July 17), 68 boats fished in District 106 and 61 fished in District 108 (Appendices A.1 and A.7). Indices of inriver run strength of Talhtan sockeye continued to be good with high catch rates in the lower river commercial fishery. Both districts were open for an initial 3 days of fishing time. Fishing ground surveys showed that sockeye salmon CPUE for the three-day opening was uniformly good in District 106 and well above average in District 108. A one-day extension occurred in both Districts. The inseason otolith readings for week 29 indicated that the marked Tahltan and Tuya fish contributed 6.7% of the District 106 catch and 19.9% of the District 108 catch. The SMM run prediction continued to increase for Talhtan sockeye salmon and decrease for mainstem sockeye salmon. The estimated U.S. harvest of Tahltan sockeye salmon by the end of this week was 77,692 fish, with a U.S. TAC of 83,470 fish. The estimated U.S. harvest of mainstem sockeye salmon was 17,017 fish with a U.S. TAC of 0 fish. The mainstem run was estimated to be 28,604 sockeye salmon. It was believed that the SMM was under forecasting the mainstem run size due to the Tahltan sockeye run being stronger and later than normal. The test fishery was not run this week or last week because the lower river commercial fishery was open continuously for 7 days each week. An enlarged closure around Salmon Bay was implemented to increase sockeye escapement into that lake system.

During week 30 (July 18 to July 24), there were 70 boats fishing in District 106 and 49 boats fishing in District 108 (Appendices A.1 and A.7). Both districts were open for an initial 3 days. The CPUE in both Districts 106 and 108 was below average. No midweek openings or fishery extensions occurred. The U.S. catch of Tahltan sockeye salmon was estimated at 80,483 fish with a TAC of 99,574 fish. The inseason otolith readings for week 30 indicated that the marked Tahltan and Tuya fish contributed to 2.4% of the District 106 catch and 10.2% of the District 108 catch. The SMM estimated a total U.S. mainstem sockeye catch of 21,933 fish, with a TAC of 0 fish. The mainstem sockeye run size estimate dropped to 19,633 fish. Catch rates in the lower river commercial fishery were still high, but the proportion of Tahltan/Tuya fish to mainstem fish still remained fairly high.

During -week 31 (July 25 to July 31), District 108 was closed and District 106 was open for 2 days. District 108 was closed and time in district 106 was reduced due to the concern for the mainstem stock. The Talhtan and Tuya stock should have been mostly through the district fisheries based on historical migratory timing information and the relatively low abundance of thermally marked Tahltan and Tuya fish in week 30. The continual declining SMM mainstem stock forecasts and the poor sockeye catch rates in the prior week indicated that the mainstem stock run was more than likely as low, if not lower than the preseason forecast. In addition, preliminary mark and recapture estimates indicated a low mainstem run. A total of 70 boats fished in District 106 for the opening. Sockeye catch rates were improved from the prior week and were average. The U.S. catch of Tahltan sockeye salmon was estimated at 81,054 fish with a TAC of 103,439

fish. The SMM estimated a total U.S. mainstem sockeye catch of 22,771 fish, with a TAC of 3,909 fish. The mainstem sockeye run size estimate nearly doubled this week to 38,161 fish.

During statistical week 32 (August 1 to August 7), District 106 was open for an initial 3 days and District 108 remained closed. A one-day extension occurred in District 106 due to the increased proportions of pink salmon in the catch. The final model run in week 32 indicated a total U.S. harvest of Stikine sockeye to be 111,468 with a total U.S. TAC of 120,726 (Table 1). The U.S. Tahltan sockeye harvest was estimated to be 81,580 fish with a U.S. TAC of 102,016 fish. The mainstem sockeye harvest by the U.S. was estimated to be 24,380 fish, with a TAC of 12,779 fish. The total sockeye run estimate increased to 55,901 fish, approximately 11,500 fish above the preseason forecast.

During statistical weeks 33 through 35, both Districts 106 and 108 were managed for pink salmon. District 108 was re-opened in week 33. Both Districts were open four days a week during through week 35. Section D of District 106 was closed from week 33 through statistical week 36. Pink harvests in both districts are not always a true reflection of abundance because low prices for pink salmon and catches of other more valuable species may affect the fishing patterns and methods. During the 2004 season, the fishing effort was substantially less than average in most weeks. Total pink harvest was below average (Appendices B.1 and B.7).

Coho salmon management typically commences in late August or early September in both the District 106 and 108 gillnet fisheries. During week 36 (August 29 to September 4) the management emphasis changed from pink salmon to coho salmon. Prior to the change to coho salmon management the District 106 fishery harvested 86,111 coho salmon, approximately 62% of the total District 106 coho catch. The Alaska coho hatchery contribution to the District 106 fishery was above average the first 5 weeks but below average the remainder of the season. Catch rates during the fall coho season were generally below average in both districts. Districts 106 and 108 were open three days per week from week 36 through 41, except in weeks 37 and 41 when the districts were only open for 2 days per week. (Appendices B.1 and B.7). Troll coho catch rates across the region were very good. Abnormal weather patterns may have contributed to the poor gillnet catches. The season ended with a final 2-day opening during week 41 (October 3 to 9).

### *Canadian Fisheries*

Final harvest estimates from the combined Canadian commercial and aboriginal gillnet fisheries in the Stikine River in 2004 included: 3,857 large Chinook, 2,574 non large Chinook salmon, 84,866 sockeye salmon, 275 coho salmon, 8 pink salmon, and 133 chum salmon (Appendices A.10, A.12 and A.13). In addition to these catches, 1,675 sockeye salmon were taken in a terminal fishery located at the mouth of the Tuya River (Table 2 and Appendix B.18). Catches of large and non large Chinook salmon, sockeye salmon, and chum salmon were above average. The catch of 3,857 large Chinook salmon was above average. The catch of 2,574 non large Chinook salmon was over above average (Appendix



B.17). The catch of 84,866 sockeye salmon was above average, while the catch of 133 chum salmon was average. The coho salmon and pink salmon catches of 275 and 8 fish respectively were below average. (Appendix B.17). The final estimate of the total contribution of sockeye salmon from the Canada/U.S. fry-planting program to the combined Canadian aboriginal and commercial fisheries was 26,689 fish, 31.4% of the catch (Table 2).

Two test fisheries (for sockeye salmon and coho salmon) were conducted for stock assessment purposes in the lower Stikine River in 2004. The test fisheries were located immediately upstream from the Canada/U.S. border. Combined test fishery catches included: 80 large Chinook, 51 non large Chinook salmon, 1,338 sockeye salmon, 487 coho salmon, 56 pink salmon, and 183 chum salmon (Appendix A.15). One objective of the sockeye salmon test fishery was to obtain data for a mark-recapture study. Additional objectives of the sockeye test fishery were similar to those in previous years: to provide inseason catch, stock ID and effort data for input into the SMM to forecast the inriver run size; and, to determine migratory timing and stock composition of the sockeye run for use in the postseason estimations of the inriver sockeye salmon and coho salmon run sizes. The objectives of the coho test fishery were to provide a measure of run timing through the fishery, age and gender profiles, and to assess relative run size based on catch per unit.

#### **Lower Stikine River Commercial Fishery**

Canadian commercial fishers in the lower Stikine River harvested 2,431 large Chinook salmon, 2,077 non large Chinook salmon, 77,530 sockeye salmon, 271 coho salmon, 8 pink salmon, and 133 chum salmon in 2004 (Appendix A.10). The sockeye salmon catch was above average (Appendix B.12). The harvest of large and non large Chinook salmon was above average. The coho salmon and pink salmon catches of 217 and 8 fish, respectively, were below average. The chum salmon catch was above average.

Based on final estimates (Table 2), the stock composition of the lower river sockeye salmon catch was as follows: 21,894 planted Tahltan fish, 28.2% of the sockeye salmon catch; 34,319 wild Tahltan fish, 44.3% of the catch; 19,497 mainstem fish, 25.1% of the catch; and 1,819 planted Tuya fish, 2.3% of the catch (Appendix B.13).

Weekly guideline harvests, based on SMM forecasts of the total allowable catch (TAC) apportioned by average run timing and domestic and international allocation agreements, were developed each week to guide management decisions during the sockeye season. Particular attention was directed at the inriver run and escapement forecasts of the various stock groupings. Management through week 30 (week ending 24 July) was focused primarily on the Tahltan Lake sockeye stock, after which it switched to mainstem sockeye stocks through the end of August. Coho salmon management focus commenced at the end of August.

The fishery commenced at noon on Sunday, June 20 (week 26) for a scheduled opening of 2 days. The catches were below average partly due to high and rising water. The fishery was extended one day in an effort to make up for the poor fishing opportunities

during the first 2 days of the opening, in concert with expectations of seeing healthy sockeye numbers in the river based on both the preseason TAC and the above average catches in Districts 106 and 108 during week 25. Fishing effort was relatively light.

The fishery was posted for a three-day opening in week 27 (June 27 to July 03). CPUE in day one of the fishery was 50% below the average, but improved to approximately 76% of average in day 2. Tahltan/Tuya sockeye stocks (small-egg fish) represented over 90% of the catch. The catch of Tuya fish was judged to be low based on the 6% showing of this stock in week 26. Tuya catches in 106 and 108 were also low in weeks 25 and 26. The above average catch and CPUE in District 108 during week 26, and the 2-day mid-week extension, indicated a strong return and complemented the preseason forecast of an above average sockeye run. Canada's guideline catch for week 27 was approximately 15,000 fish; the catch totaled only 2,200 fish after 2 days of fishing. A SMM estimate based on the test fishery catches in week 26 indicated a Tahltan Lake sockeye run size of approximately 77,700 fish, less than half of the preseason expectation. The model estimate produced a Canadian guideline harvest of 8,000 fish for the current week, substantially less than the guideline harvest provided by the preseason forecast. The fishery was extended one day. No further extension were granted based on the uncertainty of the early season performance of the SMM and concerns that the model could potentially over-project run size as had occurred in past years. The cumulative catch of Tahltan Lake sockeye salmon for week 27 was 4,872 fish, well below the guideline catch of 8,000 to 15,000 fish. CPUE of Tuya Lake and mainstem sockeye stocks were well below average. It appeared that the fish were probably late entering the fishery, which may have been due to the above average water levels.

In week 28 (July 04 to July 10) the fishery was posted for a four-day initial opening with expectation of an extension, which was based on the record high test fish catches reported Friday through Saturday previous to the opening. The commercial fishery fishing zone was extend ~25 km upriver to the mouth of Flood River. Daily CPUE effort was over double the average for the first three days of the fishery and the weekly guideline catch was ~34,000 Tahltan Lake sockeye salmon. This substantial increase of Canadian TAC was based on the assumption that the majority of Tahltan Lake fish (~80%) cleared the US fisheries and that the US could not catch their allocation. This observation prompted a 2-day extension. The catches of Tahltan Lake sockeye continued to be over twice the average for days four and five and represented 91% of the catch. The fishery was extended an additional day. The total catch of 22,000 Tahltan Lake sockeye salmon in the seven-day fishery prosecuted in week 28 was substantially below the target catch of approximately 34,000 fish. One licence fished for part of the opening at the newly opened upper zone of the fishery. The below average return of mainstem fish continued to hold over from week 27. The CPUE of Tuya Lake sockeye salmon was also below average.

The fishery was posted for four days for week 29 (July 11 to July 17), based on an inriver SMM projection of Tahltan lake sockeye salmon of ~93,000 fish, with a cumulative guideline harvest of ~51,000 Tahltan Lake fish. The guideline target for week 29 was ~24,000 Tahltan Lake sockeye salmon. The CPUE of Tahltan Lake sockeye stocks through to day three was almost double the average (205 s/f/d vs. 115 s/f/d). The total

catch after three days of fishing was ~12,000 fish. The abundance of Tahltan Lake sockeye salmon and the weekly guideline harvest after day three of the fishery prompted a four day extension. The total catch of Tahltan Lake sockeye salmon after day seven was 17,618 fish, well below the weekly guideline harvest of ~24,000 fish. The catch of Tuya sockeye salmon was well below average. The catch and CPUE of mainstem sockeye salmon was slightly above average, even though the management model indicate an inriver run size of ~ 21,000 fish, well below average, but within the escapement goal range of 20,000 to 40,000 fish. The upper fishing zone saw an increase in effort in week 29, with one licence fishing the entire opening and a second licence fishing approximately a third of the opening. The potential for an ESSR (excess to salmon spawning requirements) at Tahltan Lake was articulated to the Tahltan First Nations.

The fishery was posted for three days for week 30 (July 18 to July 24) based on a SMM projection of Tahltan lake sockeye stocks of ~92,000 fish, with a cumulative guideline harvest of ~58,000 Tahltan Lake fish. The allowable catch for week 30 was ~13,000 Tahltan Lake sockeye salmon. The overall CPUE observed in day one and 2 was close to three times average (220 sk/net/day vs 77 sk/net/day). Tahltan Lake sockeye salmon were the predominate stock in the catch. The fishery was extended one day, based on the continued strong return of Tahltan Lake fish, and a projected Tahltan Lake weir count of ~70,000 sockeye salmon. The cumulative weir count on 21 July was 14,147 fish. The SMM continued to predict a weak return of mainstem fish, with an estimated inriver abundance of ~21,000 fish. An independent estimate using the historic mainstem sockeye CPUE against inriver run size was generated and indicated the inriver run size of mainstem sockeye salmon was ~50,000 fish, and, therefore, a Canadian TAC of ~10,000 fish. The cumulative catch of mainstem sockeye at the onset of week 30 was ~6,400 fish. The cumulative guideline catch for week 30 was ~5,000 fish (50% of the mainstem through by week 30), which was already exceeded before start of the week 30 fishery. The mainstem sockeye escapement projection was close to the low end of the 20,000 to 40,000 escapement goal range. The final week 30 catch of Tahltan Lake sockeye salmon was 6,649 fish with a cumulative catch of 51,293 fish. The total week 30 catch of mainstem sockeye salmon was 2,221 fish, with a cumulative catch of 8,606 fish. The catch of Tuya fish was 191, with a cumulative catch of 1,600 pieces. The Tahltan First Nations accepted the ESSR licence after researching the logistics and securing a market for the fish.

In week 31 (July 25 to July 31) the fishery was posted for four days. The CPUE of Tahltan Lake sockeye salmon of 52 fish/net/day was over double the average. The SMM model projected an inriver Tahltan run size of ~143,000 fish, while an independent regression analyses indicated an inriver run size of ~129,000 fish. Due to run timing of the Tahltan stock, whereby on average 96% of the fish transit the fishery by week 31, there was little chance in harvesting all of the ~40,000 surplus Tahltan fish. The SMM continued to predict a very weak return of mainstem sockeye. The inriver mainstem sockeye estimate was only 19,500 fish. An independent regression analyses indicated the run to be ~51,000 fish and thereby provided some mainstem sockeye stock TAC, based on attaining spawning numbers near the lower limit of the escapement range. The mainstem CPUE of 80 fish/net/day was above average of 69 fish/net/day. Primarily



because of the low mainstem sockeye return generated by SMM, the fishery was held at four days. The total catch for week 31 was 2,832 Tahltan Lake sockeye salmon, for a total cumulative catch of 54,125 fish. The catch of mainstem fish in week 31 was 4,346 fish for a total cumulative catch of 12,952 sockeye. US district 108 was closed in week 31. The Tahltan First Nations retired their ESSR licence, due to the low price offered for Tahltan Lake sockeye salmon. The ESSR licence was then open to other interested parties. Interest was expressed, but due to time constraints and the effort required to mount an ESSR fishery at Tahltan Lake, an ESSR fishery was not prosecuted.

In week 32, (Aug 01 to Aug 07) the fishery was posted for four days and extended an additional day based on the above average CPUE of mainstem fish (78 fish/net/day vs 46 fish/net/day) and on an increase in projected run size from both the SMM (22,900 fish) and the independent regression analyses (56,600 fish). The increase in mainstem sockeye catches and projections were likely due to the District 108 closure in week 31. District 108 was closed again in week 32. The final catch of Tahltan Lake sockeye in week 32 was 1,325 fish with a cumulative catch of 55,449 sockeye. The final catch of mainstem fish in week 32 was 4,799 fish with a cumulative catch of 17,752 sockeye.

In week 33, (Aug 08 to Aug 14) the fishery was posted for four days with no extensions granted. Very little fishing effort was expended in day four of the opening. The mainstem sockeye salmon CPUE of 54 fish/net/day was over double the average. Both the SMM (28,600 fish) and the independent regression analyses (62,500 fish) indicated an increase in run size of mainstem sockeye stocks. The latter estimate resulted in a weekly guideline catch of ~11,600 fish, but a catch of this magnitude in week 33 when on average 90% of the mainstem run has exited the fishery was highly unlikely. The final catch of Tahltan Lake sockeye salmon in week 33 was 534 fish, with a cumulative catch of 55,983 fish. The final catch of mainstem sockeye salmon in week 33 was 1,718 fish with a cumulative catch of 19,470 fish, below the weekly guideline catch of ~30,000 fish as calculated from the independent regression analyses. The coho catch was 168 fish and did not appear to play a role in instigating an increase in fishing effort.



**Table 2.** Terminal run reconstruction for Stikine River sockeye salmon, 2004.

	Tahltan Mainstem		Total	Tahltan			Total	All	All	
				Tuya	Wild	Hatchery	Stikine	Planted	Wild	
Escapement	63,372	35,809	99,181	1,962	30,996	32,376	101,144	34,339	66,805	
ESSR Catch				1,675			1,675	1,675	0	
Biological Samples	420		420		225	195	420	195	225	
Broodstock	4,243		4,243		2,993	1,250	4,243	1,250	2,993	
Natural Spawning	58,709	35,809	94,518		28,715	29,994	94,518	29,994	64,524	
Excess				287			287	287		
Canadian Harvest										
Indian Food	6,240	499	6,739	608	3,346	2,549	7,347	3,157	3,845	
Upper Commercial	539	46	585	42	301	238	627	280	347	
Lower Commercial	54,841	21,413	76,254	1,276	32,717	22,124	77,530	23,400	54,130	
Total	61,620	21,958	83,578	1,926	36,364	24,911	85,504	26,837	58,321	
% of Harvest	40.3%	45.1%	41.4%	31.2%						
Test Fishery Catch	686	608	1,294	44	409	277	1,338	321	1,017	
Inriver Run	125,677	58,376	184,053	3,932	67,768	57,564	0.809	187,985	61,497	126,144
U.S. Harvest										
106-41&42	27,098	1,532	28,630	2,244	16,640	10,458	30,874	12,702	18,172	
106-30	929	526	1,455	138	336	593	1,593	731	862	
108	63,347	24,666	88,013	1,869	37,274	26,073	89,882	27,942	61,940	
Total	91,374	26,724	118,098	4,251	54,250	37,124	122,349	41,375	80,974	
% of Harvest	59.7%	54.9%	58.6%	68.8%						
Test Fishery Catch	0	0	0	0	0	0	0	0	0	
Total Run	217,051	85,100	302,151	8,183	122,018	94,688	310,334	102,872	207,118	
Escapement Goal	24,000	30,000	54,000	0						
Terminal Excess				931						
Total TAC	192,366	54,491	246,857	7,253			254,110			
Total Harvest	153,679	49,290	202,970	7,896			210,866	70,208	140,313	
Canada TAC	96,183	27,246	123,428	3,626			127,055			
Actual Catch	61,620	21,958	83,578	1,926			85,504	26,837	58,321	
% of total TAC	64.1%	80.6%	67.7%				67.3%			
U.S. TAC	96,183	27,246	123,428	3,626			127,055			
Actual Catch	91,374	26,724	118,098	4,251			122,349	41,375	80,974	
% of total TAC	95.0%	98.1%	95.7%				96.3%			

<sup>a</sup> Escapement into terminal and spawning areas from traditional fisheries.

<sup>b</sup> Catch allowed in terminal areas under the Excess Salmon to Spawning Requirement license.

<sup>c</sup> Fish returning to the Tuya system are not able to access the lake where they originated due to velocity barriers.

<sup>d</sup> The number of Tuya fish that should be passed through traditional fisheries in order to harvest the Tuya stock at the same rate as the Tahltan stock to ensure adequate spawning escapement for Tahltan fish.

<sup>e</sup> Includes traditional, ESSR, and test fishery catches.

<sup>f</sup> Does not include ESSR or test fishery catches.

<sup>g</sup> U.S. harvest estimate differs from Joint Interception Committee estimate because no estimates are made for catches other than in the listed fisheries.

In week 34, (Aug 15 to Aug 21) the fishery was posted for four days with no extensions granted. Again this week, both the SMM (38,000 fish) and the independent regression analyses (67,100 fish) indicated an increase in run size of mainstem sockeye. Several licences did not fish in week 34. The remaining licences fished very lightly in week 34 catching only 7 Tahltan Lake sockeye and 23 mainstem sockeye. The coho catch was only 11 fish.

In weeks 35 to 38, (Aug 22 to Sept 18) the fishery was posted to remain open to 18 September in order to target on coho salmon. Fishing effort was very light. The catches for this segment of the fishery were 6 sockeye salmon and 29 coho salmon. The final day of fishing was 05 September.

In general, sockeye salmon entered the lower Stikine commercial fishing grounds later than normal, when compared to average. Peak run timing, however, was normal. The observation was based on sockeye salmon CPUE in the lower river commercial fishery. The 2004 Stikine River sockeye run peaked in week 28 (04 to 10 July); the Tahltan and Tuya stocks peaked in week 28 (04 to 10 July); and, the mainstem stock peaked in week 31 (25 to 31 July) (Appendix A.11 and A.16), one week later than the normal average run timing. The Tahltan and Tuya stocks have similar timing.

As in recent years, terminal fishing activities again focused on the lower Tuya River, to harvest surplus fish returning from the fry-planting program. A six-person crew gillnetted the mouth of the Tuya River from 17 July to 07 August, and harvested a total of 1,675 sockeye salmon (Appendix B.18). In general the fishing conditions were very good, aided by the installation of an instream deflection weir, which served to enhance fishing conditions during periods of high flow. The fishery was originally scheduled to operate until late August. However, because of fish marketing problems, the fishing activities ceased on 07 August. The estimated harvest rate, even with the truncated fishery, was approximately 53%.

Out of 18 licences available for the lower river commercial fishery, 11 licenses were issued in 2004 with a maximum of 11 licenses being active in any one week (Appendix A.10). The total effort was 517 permit-days, above average permit-days (Appendix B.12). Gear was restricted to one drift or set gill net. During the third week of the fishery (week 28, 04 to 10 July), the commercial fishing zone was extended upstream, approximately 25 km upstream of the original upper boundary, located at the mouth of the Porcupine River, to the confluence of the Flood and Stikine rivers. This extension encompassed the fishing zone fished in 1997 to 2000.

### **Upper Stikine River Commercial Fishery**

A small commercial fishery has existed near Telegraph Creek on the upper Stikine River since 1975. A total of 494 sockeye salmon was caught, which was above average (Appendices A.12 and B.14). One non large Chinook salmon was harvested which was below average. The fishing effort was below average, with one fisher fishing four to seven days per week. A total of 18 days was fished and the total effort was 18 permit-days. The average fishing time was 23 days, with an average effort of 36 permit-days.

Fishery openings were based on the Lower Stikine commercial fishery openings, but lagged one week. The first opening, however, was concurrent with the lower fishery opening.

### **Aboriginal Fishery**

The Stikine River aboriginal fishery, which is located near Telegraph Creek, harvested 1,426 large Chinook, 496 non large Chinook, and 6,862 sockeye salmon (Appendix A. 13 and B.15). The harvest of large Chinook, non large Chinook, and sockeye salmon was above average (Appendix B. 15). In general, the fish were up to 2 weeks late arriving to the fishing grounds, but the peak catch and CPUE, occurring during week 29 (11 to 17 July), followed the normal recent 10-year peak run timing period.

### ***Escapement***

#### **Sockeye Salmon**

A total of 63,373 sockeye salmon was counted through the Tahltan Lake weir in 2004; above average. The 2004 sockeye count was above the upper range of the escapement goal of 18,000 to 30,000 fish (Appendices A. 17 and B.22). An estimated 25,333 fish (40.0%) originated from the fry-planting program, which is close to the 43.7% contribution of smolts observed in 2001, the principal cycle year contributing to the 2004 return (Appendix B. 24). The estimate of planted fish numbers in 2004 was based on the proportion of thermally marked otoliths from samples collected in the lower Stikine River commercial fishery. A total of 420 sockeye salmon were sacrificed at the weir for stock composition analysis. In addition, a total of 4,423 sockeye salmon was collected for brood stock, resulting in a spawning escapement of 58,710 sockeye salmon (Table 2).

The spawning escapements for the mainstem and the Tuya sockeye stock groups are estimated indirectly, by computing the ratio of Tahltan to the mainstem and Tuya components in the total inriver sockeye salmon run. Stock identification data are collected in the lower river commercial and test fisheries. The ratios of Tahltan:mainstem and Tahltan:Tuya are applied to the estimated inriver Tahltan run size, to develop an estimate of the total inriver sockeye salmon run. The escapements for Tuya and mainstem sockeye stocks are estimated by subtracting the stock-specific inriver catches from the respective inriver run estimates.

The 2004 escapement estimates are 39,287 mainstem and 1,463 Tuya sockeye salmon. The mainstem sockeye salmon stocks spawn in tributaries and lakes other than Tahltan Lake, and in the mainstem and side sloughs of the Stikine River. The mainstem sockeye spawning escapement estimate was above average, and was in the escapement goal range of 20,000 to 40,000 fish. Aerial survey results indicated a below-average escapement (Appendix B. 23). The Tuya River sockeye salmon are blocked by natural barriers, located near the mouth of river, from entering potential spawning grounds of the Tuya Lake. Sockeye are fished below these barriers in an ESSR (terminal) fishery. The 2004 Tuya ESSR (terminal) fishery harvested 1,625 sockeye salmon, representing a harvest rate of 53.4% (Appendix B.18). The fate of the remaining 1,463 Tuya fish was uncertain.

A research study funded under the Northern Fund of the PSC investigated the behaviour of Tuya River sockeye after these fish enter the Tuya River in 2004.

For the fifth consecutive year, a sockeye salmon mark-recapture program was conducted, to develop an alternate abundance-based management regime for Stikine River sockeye salmon. The final estimate of the total escapement using the Darroch estimate was 207,621 (SE=8,042) sockeye salmon (marked=1,999, recovered=700, catch=78,868), ranging from 191,858 to 223,384 fish. This estimate was above the postseason escapement estimate, and was above the escapement estimate generated from the final run of the SMM. The final sockeye stock-specific escapement estimates based on the mark-recapture study were 99,528 Tahltan fish, 1,976 Tuya fish, and 46,478 mainstem fish.

### **Chinook Salmon**

The 2004 Chinook escapement enumerated at the Little Tahltan weir was 16,381 large and 250 non large fish (Appendices A.19 and B.25). The escapement of large Chinook salmon in the Little Tahltan River was above the upper limit of the escapement goal range (2,700 to 5,300 fish with a point goal of 3,300 fish). The count of non large Chinook salmon was above average. Aerial surveys of the Tahltan River and Beatty Creek were discontinued in 2002. The peak survey Chinook count at Andrew Creek was 1,534 fish, well above average and slightly above the escapement goal range of 650 to 1,500 fish (Appendix B. 26). The aerial survey Chinook count for the Little Tahltan River was 6,014 fish, 36 % of the weir count and above average.

A mark-recapture study was conducted in 2004 concurrent with the SCMM to assess the inriver Chinook salmon abundance. Inseason mark-capture estimates were calculated weekly post week 23 (30-May to 05-July). The final postseason estimate of total system-wide spawning escapement, based on tag recoveries in the commercial fishery and spawning ground recoveries was 48,900 large Chinook salmon. The escapement was above the escapement goal range of 14,000 to 28,000 fish. The escapement to the Little Tahltan River represented approximately 34% of the total Stikine River escapement, above average.

### **Coho Salmon**

Aerial surveys of eight index sites were conducted on 03 November. The results, under only fair viewing conditions, indicated the coho escapement to be below average. Note: extremely poor viewing conditions at the Craig River index site. The Craig River is believed to be a major Stikine River coho spawning site.

Too little data exist to estimate the escapement of coho salmon the Stikine River. DFO used test fishery coho and sockeye CPUE to estimate coho salmon—a coho test fishery was conducted from the 07 Sept to 14 October. Utilizing a standard drift gillnet (33 metre by 30 mesh by 9cm mesh size) fishing a specific site, the test fishery cumulative weekly CPUE was 5.83 coho salmon, above average. The coho CPUE was 25.9% of the cumulative weekly sockeye salmon CPUE of 22.52. Based on the estimated inriver run size of sockeye salmon of 192,021 fish, and assuming the catchability of coho was the



similar to that of sockeye (the same fishing site and gear were used), the coho salmon escapement was approximately 49,051 ( $192,021 \times 0.259$  minus the inriver catch of 682). This estimate was above the upper limits of the 20,000 to 40,000 escapement goal range.

### *Sockeye Salmon Run Reconstruction*

The final postseason estimate of the terminal Stikine River sockeye salmon run size was 302,151 which 217,051 are of Tahltan Lake origin (wild & planted), 8,183 are of Tuya origin (fry from Tahltan broodstock planted into Tuya Lake), and 85,100 are mainstem stocks (Table 2). These estimates are based on inseason and historical data including otolith recovery and analysis in the U.S. Districts 106 and 108 catches; otolith analysis, egg-diameter stock-composition based on scale pattern analysis, estimates for inriver catches from the Canadian commercial, aboriginal, ESSR, and test fishery catches; and escapement data. The 2004 total run was above average (Appendix B. 29) and slightly above the preseason forecast (Table 1).

### **TAKU RIVER**

Taku River salmon are harvested in the U.S. gillnet fishery in the Alaskan District 111, in northern Southeast Alaska seine and troll fisheries, and in the Juneau area sport fishery and inriver personal use fishery (Figure 6). Canadian fisheries for Taku River salmon include a commercial gillnet fishery located in the river near the Canada/U.S. border, an aboriginal fishery, and a sport fishery.

### *Harvest Regulations*

New fishing arrangements were in place in 1999 as a result of negotiations between Canada and the United States of Annex IV, Chapter 1 of the Pacific Salmon Treaty. The arrangements that are expected to apply to the Taku River for the 1999 to 2008 period are as follows:

(1) Sockeye salmon:

(i) Except as noted below, Canada shall harvest no more than 18% of the TAC of the wild sockeye salmon originating in the Canadian portion of the Taku River each year;

(ii) If the projected inriver escapement is greater than 100,000 sockeye salmon, Canada may, in addition, harvest 20% of the projected inriver escapement above 100,000 sockeye salmon;

(iii) The Parties agree to manage the runs of Taku River sockeye salmon to ensure that each country obtains catches in their existing fisheries equivalent to each country's share of wild sockeye salmon and a 50% share of fish originating from Taku River fry plants;

(iv) The Parties agree to continue the existing joint Taku River enhancement program designed to produce annually 100,000 returning sockeye salmon.

(2) Coho salmon:

(i) The Parties agree to develop and implement an abundance-based approach to managing coho salmon on the Taku River no later than May 1, 2004. The Parties commit to developing a revised MSY escapement goal to be implemented no later than May 1, 2004.

(ii) Until a new abundance-based approach is developed, the management intent of the United States is to ensure a minimum above-border inriver run of 38,000 coho salmon, and the following arrangements will apply:

- a. no numerical limit on the Taku River coho salmon catch will apply in Canada during the directed sockeye salmon fishery (through statistical week 33);
- b. if inseason projections of above-border run size are less than 50,000 coho salmon, a directed Canadian harvest of up to 3,000 coho salmon is allowed for assessment purposes as part of the joint Canada/US Taku River mark-recapture program;
- c. if inseason projections of above-border run size exceed 50,000 coho salmon, a directed Canadian harvest of 5,000 coho salmon is allowed;
- d. if inseason projections of above-border run size exceed 60,000 coho salmon, a directed Canadian harvest of 7,500 coho salmon is allowed;
- e. if inseason projections of above border run size exceed 75,000 coho salmon, a directed Canadian harvest of 10,000 coho salmon is allowed.

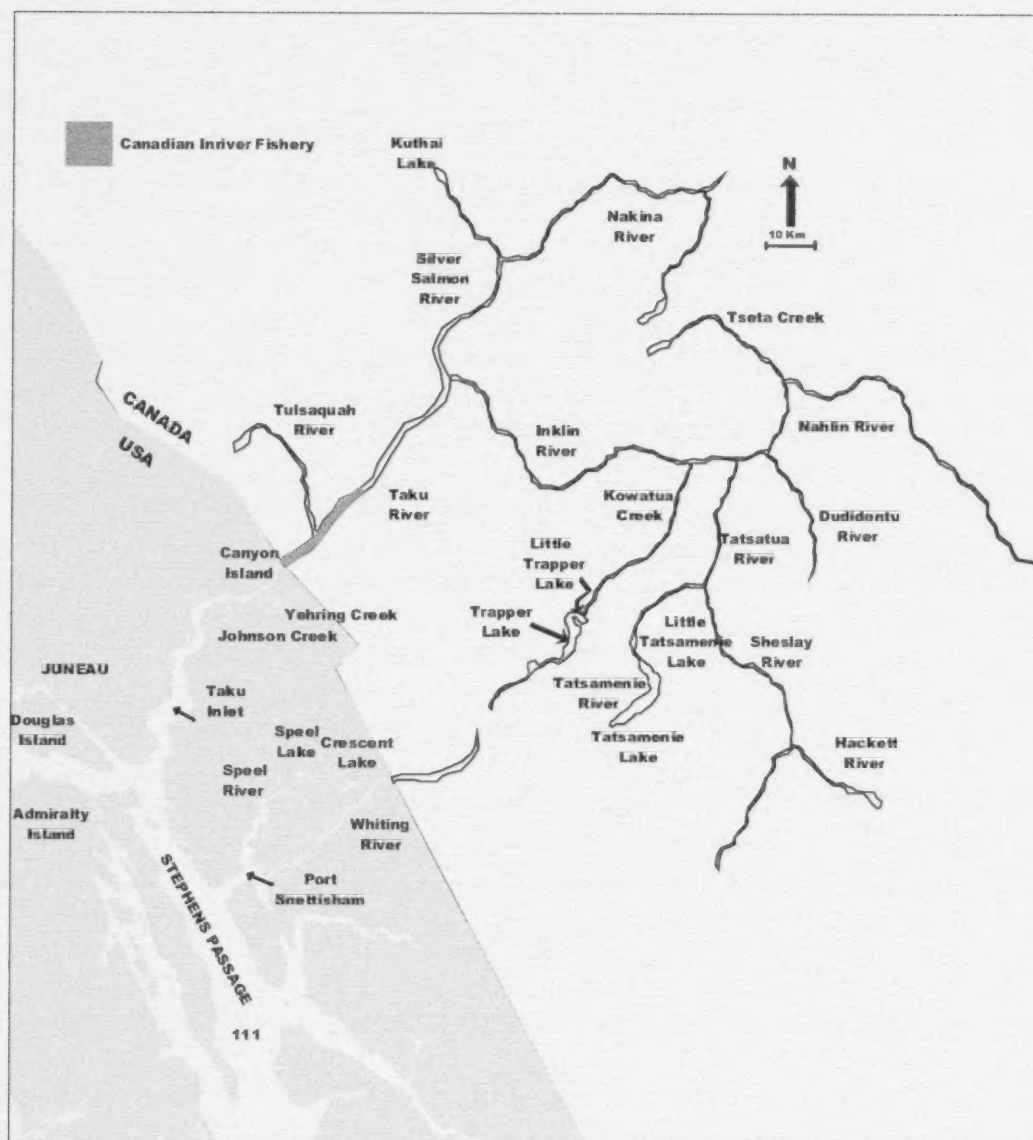


Figure 2. The Taku River and principal U.S. and Canadian fishing areas.

(3) Chinook salmon:

(i) Both Parties shall take the appropriate management action to ensure that the necessary escapement goals for Chinook salmon bound for the Canadian portions of the Taku River are achieved.

(ii) The Parties agree that new fisheries on Taku River Chinook salmon will not be developed without the consent of both Parties. Management of new directed fisheries will be abundance-based through an approach to be developed by the Committee no later than May 01, 2004. The Parties agree to implement assessment programs in support of the development of an abundance-based management regime.

(iii) The Parties shall review an appropriate MSY escapement goal for Taku River Chinook salmon by May 1999 and thereafter establish a new goal as soon as practicable.

*U.S. Fisheries*

The traditional District 111 commercial drift gillnet salmon fishery was open for a total of 63 days from June 20 through October 14, 2004 (Appendix C.1). The harvest totaled 2,291 Chinook salmon, 241,219 sockeye salmon, 45,294 coho salmon, 150,407 pink salmon, and 131,486 chum salmon. Harvests of Chinook and chum salmon were below average (Appendix D.1). The coho salmon harvest was average, and the harvest of sockeye salmon and pink salmon were above average. Weekly commercial fishery harvests and stock composition estimates for these fisheries are provided in Appendices C.1-C.3 and annual harvests from 1960 through 2004 are provided in Appendices D.1-D.3.

Hatchery stocks contributed significantly to the numbers of both sockeye and chum salmon harvested and minor numbers to the harvest of other species. The 2004 season was the fifth year of significant numbers of adult sockeye salmon returning to the Snettisham Hatchery inside Port Snettisham. These fish contributed significantly to the harvests primarily in Stephens Passage and to the Speel Arm Terminal Harvest Area (THA) fishery inside Port Snettisham.

The Chinook salmon harvest of 2,291 fish was below average (Appendix C.1 and D.1). Alaskan hatchery Chinook salmon contributed 330 fish as estimated by coded wire tag (CWT) analysis, for approximately 14% of the harvest. The Taku River stock assessment program at Canyon Island provided data to estimate the above-border Chinook salmon run. This data with the spawning ground mark-recapture data was used to estimate the spawning escapement of 75,032 large Chinook salmon, above the upper bound of the 30,000-55,000 fish range.

The traditional District 111 sockeye salmon harvest was 241,219 fish; above average (Appendices C.1 and D.1). Weekly sockeye salmon harvests in District 111 were below average in weeks 26 to 31 and weeks 40 to 41. Weekly sockeye salmon harvests were above average during weeks 32 to 39. Weekly sockeye salmon catch-per-unit-effort



(CPUE) was above average in eleven of the seventeen statistical weeks, and was 10-year records for weeks 32 to 35. Domestic hatchery sockeye salmon stocks started to contribute to the traditional fishery in weeks 28 and added significant numbers to the harvests in weeks 29 through 35. Fishermen targeting these runs of hatchery sockeye salmon and the Limestone Inlet hatchery chum salmon, increased the amount and percentage of fishing effort that occurred in Stephens Passage. Of the total traditional District 111 sockeye salmon harvest, 41% occurred in Stephens Passage, more than double the average. The contributions of wild Taku River and Port Snettisham sockeye salmon to the traditional District 111 harvest was not known until postseason analyses of stock identification data were available. However, the catch of thermally marked sockeye salmon from fry plants was estimated inseason from analysis of otoliths. Sockeye salmon from a joint U.S./Canada fry-planting program at Tatsamenie Lake contributed an estimated 676 fish to the fishery (0.3% of the harvest (Appendices C.3 and D.2). Contributions of U.S. hatchery sockeye salmon to the traditional District 111 drift gillnet fishery totaled 151,141 fish or 63% of the harvest. These were predominately Port Snettisham hatchery sockeye salmon but also included a small number of thermally marked fish from a fry-planting program at Sweetheart Lake in Port Snettisham. Historical stock composition estimates were applied to the remainder of the harvest to estimate contributions of Taku River and Port Snettisham wild stocks to the weekly harvests. The final estimate of stock composition of the harvest of wild sockeye salmon in the traditional district was 75,142 (42%) Taku River fish, and 9,153 (5%) wild Port Snettisham fish (Appendices C.2 and C.3). An additional 92,756 sockeye salmon were harvested in the Speel Arm THA fishery inside Port Snettisham. The majority of these fish were from hatchery releases, but a small portion of wild Speel Lake sockeye salmon stocks were also taken in this fishery. Stock composition estimates were based on combined postseason analysis of otoliths, scale pattern, and brain parasite incidence characteristics.

The traditional District 111 chum salmon harvest of 131,486 fish was below average (Appendices C.1 and D.1). The summer chum salmon harvest of 126,064 fish comprised 96% of the season's chum salmon harvest. The summer chum salmon run is considered to last through mid-August (week 33) and was comprised mostly of domestic hatchery fish, with small numbers of wild fish contributing to the harvest. Chum salmon returns to DIPAC hatcheries in Gastineau Channel and to the DIPAC remote release site at Limestone Inlet contributed a major portion of the harvest but quantitative contribution estimates were not available. Approximately 44% of the total traditional District 111 chum salmon harvest was made in Taku Inlet, 54% in Stephens Passage, and 2% inside Port Snettisham. The harvest of 5,423 fall chum salmon, weeks 34 and later, was average (Appendix D.1). Most of these chum salmon are assumed to be wild fish of Taku and Whiting Rivers origin.

The District 111 pink harvest of 150,407 fish was above average (Appendices C.1 and D.1).

Coho salmon stocks harvested in District 111 include runs to the Taku River, Port Snettisham, Stephens Passage, and local Juneau area streams as well as Alaskan

hatcheries. The traditional District 111 coho salmon harvest of 45,294 fish was average (Appendices C.1 and D.1). Weekly coho salmon harvests were above average during weeks 31, 36, and 38 to 39, but below average during the remainder of the season. Coho salmon CPUE was above average during weeks 29 to 31, 36, and 38 to 39. Alaskan hatchery coho salmon contributed 2,584 fish or 6% of the traditional District 111 harvest. For most of the season, weekly estimates of Taku River coho salmon abundance indicated an above average run size.

For the 2004 season, drift gillnet fishing time in the traditional District 111 areas was above average (Appendix D.1). The maximum number of boats participating in the fishery in a given week was 122 boats during weeks 33 (Appendix C.1). Fishing effort as measured by the total number of boats delivering fish each week times the number of days open to fishing was 3,442 boat-days for the season; average (Appendix D.1).

Management actions to conduct the Taku River drift gillnet fishery were limited to imposing restrictions in time and area. Because there is no bi-laterally agreed forecast for Taku River sockeye salmon, early season management of the District 111 fishery is based on fishery CPUE and Canyon Island fish wheel catches. As the fishing season progresses sufficient data is acquired to estimate the inriver run size from the mark-recapture program at Canyon Island and to use that estimate in conjunction with migratory timing and historical fishery harvest data to forecast the entire Taku sockeye run. In the first week of the season (week 26), which began June 20, three days of fishing time were allowed in both Taku Inlet (Subdistrict 111-32) and Stephens Passage (Subdistrict 111-31). The traditional District 111 sockeye harvest in the first week was below average. Fishing time for week 27 was set for four days. By the fourth day of the fishery, the projected inriver sockeye run was estimated to be 19,900 fish (Table 3). Both Taku Inlet and Stephens Passage were opened for four days in week 28 (average). The traditional District 111 sockeye harvest for the week was below average. Approximately 78% of the sockeye salmon harvested during the week came from Taku Inlet, while the remainder was harvested in Stephens Passage. Both Taku Inlet and Stephens Passage were open for three days during week 29 due to below average harvest and CPUE. The traditional District 111 harvest of 17,197 sockeye salmon was below average with 79% of the harvest occurring in Taku Inlet.

During week 30, Taku Inlet north of the latitude of Circle Point was open for 2 days in accordance with the TBR agreement to conserve the expected weak Tatsamenie sockeye return. Stephens Passage was opened for three days, one day less than average due to the below average inriver sockeye estimate. The traditional District 111 sockeye harvest was below average, with 43% of the harvest taken in Taku Inlet. Analysis of otoliths revealed that 52% (116 of 222) of the samples processed from Stephens Passage during this week were Snettisham hatchery sockeye salmon.

During week 31, Taku Inlet north of the latitude of Circle Point was open for 2 days in accordance with the TBR agreement, and Stephens Passage was open for four days. The traditional District 111 sockeye harvest of 24,198 fish was average for the week, with 23% of the harvest in Taku Inlet. Analysis of sockeye otoliths revealed that 76% (296 of

390) of the samples processed from Stephens Passage during this week were Snettisham hatchery fish. The traditional District 111 coho harvest was 3,212 fish for the week (Appendix C.1); above average.

During week 32, Taku Inlet north of the latitude of Circle Point was open for 2 days in accordance with the TBR agreement, and Stephens Passage was open for four days. With encouraging escapement through Speel Lake weir, and masses of fish observed at the head of Speel Arm, the entrance to Port Snettisham (Subdistrict 111-34) was opened for four days. Section 11C (Subdistrict 111-20) was opened for four days in conjunction with Stephens Passage due to adequate pink salmon escapement in the area. The record weekly traditional District 111 drift gillnet sockeye harvest of 54,594 fish was over three times the average, with 86% (47,196 fish) harvested in Stephens Passage and Port Snettisham where the fleet was targeting hatchery sockeye salmon bound for Port Snettisham. Analysis of sockeye otoliths revealed that 81% (268 of 331) of the samples processed from Stephens Passage during this week were Snettisham hatchery fish.

The week 33 traditional District 111 drift gillnet harvest of 67,654 sockeye salmon was the second highest sockeye harvest for any statistical week since 1960, and over ten times the week 33 average of 6,610 fish. Taku Inlet north of the latitude of Circle Point was open for an average of three days, due to average fish wheel catches, and Stephens Passage including Port Snettisham and Section 11C, was open for 4 days. The Speel Arm THA (Subdistrict 111-33) was initially opened for four days due to good escapement through the Speel Lake weir, and then extended till further notice when the minimum escapement of 4,000 sockeye salmon to Speel Lake was accounted for. In the traditional District 111 fishing areas, 33% of the 6,370 sockeye salmon harvested in Taku Inlet, 81% of the 26,472 sockeye salmon harvested in Stephen's Passage, and 94% of the 34,812 sockeye salmon harvested inside Port Snettisham were of Port Snettisham hatchery origin. An additional 22,093 sockeye salmon were harvested in the Speel Arm THA in week 33.

The fall drift gillnet season in District 111 lasted nine weeks, beginning on August 15 in week 34, and lasting until October 14 in week 42. In the first week of the fall season (week 34), fishing time was set at four days in all the traditional drift gillnet areas to allow harvest of the strong Taku River coho return and continued harvest of Port Snettisham hatchery sockeye salmon. The week 34 traditional District 111 coho harvest of 3,113 fish was below average of 4,354 fish. Section 11C closed for the season at the end of the week 34 fishery. Taku Inlet openings were limited to three days per week in week 35, and 36 to conserve Taku River fall chum stocks, and Stephens Passage and Port Snettisham were open for an average of three days. The traditional District 111 coho harvest of 4,935 fish in week 35 was average, and the week 36 harvest of 8,160 fish was above average. During week 37, both Taku Inlet and Stephens Passage were initially opened for three days. As the opening progressed, Canyon Island fish wheel counts and inriver abundance estimates of coho salmon strengthened, prompting a one-day extension. Stormy weather hampered the fleet during week 37, and the traditional District 111 harvest of 3,780 coho salmon was well below average. The week 37 traditional District 111 harvest of 1,101 chum salmon however, was above average. Week 38 was



the last week open to drift gillnetting in Port Snettisham, and Taku Inlet, Stephens Passage, and Port Snettisham were open for four days. The week 38 traditional District 111 harvest of 10,901 coho salmon was above average, and the harvest of 1,175 chum salmon was above average. Taku Inlet and Stephens Passage were open four days per week during weeks 39 to 42, closing for the season on October 14. The week 39 coho harvest of 4,030 fish was average, and the chum harvest was well below average. Effort dropped dramatically during weeks 40 and 41, and there were no reported landings in week 42.

**Table 3.** U.S. inseason forecasts of terminal run size, TAC, inriver run size, and the U.S. harvest of Taku River sockeye salmon for 2004.

Stat Week	Inriver Run	Terminal Run	Total TAC	U.S. TAC	Projected U.S. Catch
27	77,725	128,212	53,212	43,634	55,488
28	79,961	145,052	70,052	56,684	65,091
29	119,743	193,866	118,866	97,360	74,123
30	114,124	187,660	112,660	92,001	73,536
31	125,674	191,723	116,723	95,119	66,050
Postseason	127,047	204,015	129,015	105,031	76,968

Terminal run does not include any marine harvest of Taku River salmon that might occur outside of District 111.

Several other fisheries in the Juneau area harvested transboundary Taku River salmon stocks in 2004. Personal use permits were used to harvest an estimated 1,031 Taku River sockeye salmon (Appendix D.4). In 2004, an estimated 14,443 Chinook salmon were harvested by sport fisheries in the Juneau area. A number of stocks are known to contribute to the Juneau area sport fishery, including those from the Taku, Chilkat, and King Salmon rivers, as well as local hatchery stocks. The major contributor is large, wild mature fish from the Taku River through mid-May and Alaska hatchery fish thereafter. Of the Chinook salmon harvested 2,700 were estimated to be of Taku River origin, based on coded wire tag analysis and maturity data. The July Hawk Inlet shoreline purse seine fishery in Chatham Strait opened for 10 hours in week 28 and for two 15-hour openings in week 29. The first 2 openings had Point Marsden as the southern boundary, and the third opening had Point Hepburn as the southern boundary. All three openings had the latitude of Point Couverden as the northern boundary. The harvests for these fisheries totaled 536 Chinook salmon, 17,490 sockeye salmon, 3,799 coho salmon, 625,243 pink salmon, and 173,633 chum salmon. A large number of stocks, including those from the Taku River, contribute to this pink salmon-directed fishery. A purse seine test fishery was also conducted each week in weeks 27 through 30, between Hawk Inlet and Point Retreat, with harvests totaling 33 Chinook salmon, 1,731 sockeye salmon, 155 coho salmon, 16,152 pink salmon, and 8,903 chum salmon.

### *Canadian Fisheries*

Taku River commercial fishers harvested 19,860 sockeye, 5,954 coho, 2,082 large Chinook, and 334 non large Chinook salmon in 2004 (Appendix C.4). The sockeye catch was below average (Figure 8). Fish originating from fry plants contributed an estimated 265 fish to the catch, comprising 1% of the total sockeye harvest. The catch of coho



salmon was average. The catch of large and non large Chinook salmon was above average (Appendix D.5). There were 40 days of fishing; this was below average. The seasonal fishing effort of 294 boat-days was below average. As in recent years, both set and drift gill netting techniques were used with the majority of the catch taken in drift gillnets. Mesh sizes were restricted to less than 150 mm through July 16, to minimize the incidental catch of Chinook salmon. In the aboriginal fishery, 277 large and 116 non large Chinook salmon, 120 sockeye salmon, and 450 coho salmon were harvested.

The final inseason abundance estimate for the inriver coho run was 143,970 fish. Accordingly, as per PST provisions, the Canadian allowable catch after week 33 was 10,000 salmon. Only about 60% of this allocation was taken, since commercial fishing activity decreased significantly after week 34. (A very small number of coho salmon would also have been harvested in the sport fishery; however, recreational catch figures are not currently available).

According to the final postseason run estimate of 201,636 wild sockeye salmon, Canadian catches (excluding test fishery catches) represented 15% to 19% of the TAC. The enhanced run size was estimated to be only 2,381 fish, 268 of which were harvested in Canadian commercial or aboriginal fisheries. This represented approximately 11.1% of the Canadian TAC of enhanced fish.

Two test fisheries were conducted were conducted in 2004 to capture Chinook and coho salmon for stock assessment purposes. The Chinook test fishery took place from May 2 through June 15 (statistical weeks 19 to 25) and landed 1,489 large (greater than or equal to 660 mm mid-eye-to-fork length) Chinook salmon, 294 non large Chinook salmon, and 19 sockeye salmon. The coho test fishery took place from August 29 through October 9 (statistical weeks 36 to 41), and landed 3,266 coho salmon and 72 sockeye salmon.

The Canadian preseason sockeye forecast was for a total run of approximately 231,000 fish, which was the average of a sibling-based forecast (263,036 sockeye salmon) and a stock recruitment-based forecast (199,270 sockeye salmon). The sockeye forecast was below average run (Canadian estimate). The total run incorporates an assumed U.S. harvest of 5% in marine approach waters (outside District 111); the terminal sockeye run forecast was therefore approximately 219,000 fish. The preseason forecast was used to guide weekly management actions for the first 2 weeks of the season; thereafter, inseason forecasts based on the joint Canada/U.S mark-recapture project were used (Table 4). For coho salmon, the preseason outlook was for an above-average run, due to favourable smolt numbers encountered in the 2003 coded-wire tagging program.

**Table 4.** Canadian inseason forecasts of total run size, total allowable catch (TAC), and spawning escapement of Taku sockeye salmon, 2004.

Stat. Week	Total Run	TAC	Projected Escapement	Canadian TAC	Inseason Guideline	Actual Catch
25	231,153	156,153	75,000	28,108	1,903	0
26	231,153	156,153	97,826	28,108	3,996	2,015
27	231,154	156,154	58,492	28,108	6,961	3,860
28	140,324	65,324	77,092	11,758	4,275	5,465
29	172,900	97,900	91,875	17,622	8,503	8,629
30	197,581	122,581	100,386	22,142	13,420	12,138
31	199,959	124,959	99,500	22,493	16,087	14,999
32	206,430	131,430	108,003	25,258	20,793	16,714
33	209,600	134,600	105,653	25,359	22,779	18,390
34	210,189	135,189	101,228	24,580	23,181	19,185
35	210,284	135,284	102,264	24,804	24,116	19,777
36	210,728	135,728	102,964	25,024	24,655	19,860

As in previous years, cumulative guideline harvests were developed each week to guide weekly management decisions so that: a) the catch was consistent with conservation and Treaty goals; and b) management was responsive to changes in forecasts of abundance, i.e. abundance-based. The guidelines were based on current inseason forecasts of the Canadian sockeye TAC (based on mark-recapture estimates) apportioned by historical run timing.

The commercial fishery commenced on June 20 (statistical week 26) for a scheduled opening of three days. An opening of three days was chosen over the more traditional 2 days for the following reasons:

- The Chinook run projection based on mark-recapture data was 44,000 fish assuming average timing. Test fishery CPUE was 20% above average despite high water levels. A high pressure weather system was in place indicating that water levels would be increasing. By-catch was not anticipated to interfere with reaching the escapement goal.
- Although total sockeye run forecast was only average, the parent-year escapements for Kuthai were much higher than last year's, which saw an above-average escapement to the lake. In addition, although the cumulative fishwheel catch was average, the catches for the 2 days prior to the posting date (June 18) were 2.0 and 2.4 times average respectively. Furthermore, the opening was somewhat later than usual (week 26 as opposed to week 25).

A one-day extension was granted due to continued high fishwheel catches, and relatively low fishery catches believed to be partly due to high water levels.

The following week (i.e. week 27, starting June 27), was opened on four days. The guideline sockeye harvest based on the preseason forecast through this week was 6,961 fish, of which 2,015 had been taken in week 26, leaving a balance of 4,946 fish. Just prior

to the opening, the Tulsequah flood occurred in conjunction with what were already high water levels. The flood receded over days 1 and 2 but water levels still remained very high. An extension of one day was granted at the close of day 3, since there were still 1,086 fish to be taken. Catch was anticipated to be low as water levels were rising again. The final sockeye catch for the opening was 1,845 fish.

The week 28 fishery opened on three days starting July 4. No extension was granted as both the preseason and inseason forecasts indicated that the guideline harvest had been exceeded. The final catch for the opening was 1,605 sockeye salmon.

Week 29 (starting July 11) also opened on three days. Based on inseason mark-recapture data the sockeye run projection was only 128,447 fish and the cumulative guideline harvest had been exceeded by 823 fish. However, it was anticipated that the run status would improve as the Trapper Lake stock moved in. This proved to be correct, with the projection increasing to 196,668 fish by the close of day 2. The guideline harvest increased to 12,335 fish, versus an actual catch of 7,672 fish, leaving a balance of 4,663 fish for the remainder of the week. CPUE was 100 sockeye/boat/day (s/b/d) on day 2 and matched the weekly average of 101. Canyon Island fishwheel CPUE on Sunday, July 11 and Monday, July 12 was 1.3 and 3.8 times average CPUE, respectively. An extension of one day was granted.

It was agreed pre-season that co-ordinated Canada/U.S. actions would be taken during statistical weeks 30 to 33 (starting July 18, 25, August 1 and 8 respectively) in order to protect the Tatsamenie Lake stock, which was anticipated to be very weak. (The pre-season forecast, based on smolt emigration estimates, was for a return even lower than that observed in 2003). Unless otherwise agreed to inseason, the U.S. was to restrict openings to 2 days in Taku Inlet during weeks 30 to 32; Canada was to do the same for its fishery during weeks 31 to 33.

Week 30 (starting July 18) opened on three days. At the close of day 2, it was extended by 2 days based on the following: a balance of 1,896 fish showing in the guideline harvest; Canyon Island fishwheel CPUE for July 18 and 19 that was 1.6 and 2.7 times average CPUE, respectively; and average fishery CPUE (112 s/b/d versus the weekly average of 117) despite slightly above-average water levels. A total of 3,164 sockeye salmon were caught this opening.

As per the pre-season arrangement, weeks 31 to 33 were opened 2 days, and closed on schedule. At the close of day 1 in week 31, the run projection, cumulative harvest and guideline harvest were 196,088, 15,968 and 13,465 sockeye salmon, respectively. For day 1 in week 32, these values were 105,626, 21,139 and 15,871, sockeye salmon, respectively. At the close of week 33, the run projection had increased to 113,297 fish, and the balance in the guideline harvest was 6,671 fish. Fishery performance was average in week 31 (130 s/b/d versus 121), slightly below average in week 32 (75 versus 111), and 79% above average in week 33. Water levels were favourable for all openings. Fishwheel performance for week 31 was 33% above average (20 sockeye/hour (s/h)

versus 15), for week 32, 22% below average (11 versus 14); and, for week 33, 56% above average (16 versus 10). The total sockeye landing for these three weeks was 6,252 fish.

Week 34 marked the beginning of coho salmon season, and effort was slightly greater than 2003, due to improved market conditions. The coho run projection was approximately 82,000 fish, which was sufficient for the maximum TAC, i.e. 10,000 fish. The fishery was opened on three days and extended by one. Landings of coho salmon and sockeye salmon were 697 and 795 respectively.

Weeks 35 and 36 saw five day openings, with only 2 to four licences fishing. Catches consisted of 2,913 coho salmon and 675 sockeye salmon. These were the last commercial catches of the season, despite the fishery being open for seven days per week through October 10, the close of week 42. A test fishery operated throughout this period for stock assessment purposes and landed 3,266 coho salmon and 72 sockeye salmon.

The cumulative commercial fishery sockeye CPUE for the season was 714 s/b/d; below average. CPUE was average to below average throughout the season except for week 33. Peak CPUE was observed in week 31, which is the week in which the fishery has peaked most often over the previous ten years. The fact that water levels dropped from average to well below average over the course of the opening likely had a positive influence on the CPUE this week.

The cumulative coho CPUE through week 36 (when commercial fishing ceased) was 353 coho/boat/day. This was above average.

### *Escapement*

#### **Sockeye Salmon**

Spawning escapement of sockeye salmon into the Canadian portion of the Taku River drainage is estimated from the joint Canada/U.S. mark-recapture program. Counting weirs operated by DFO at Little Trapper and Tatsamenie lakes provided information on the distribution and abundance of discrete spawning stocks within the watershed. An additional sockeye enumeration program was conducted at Kuthai Lake by the TRTFN, who expanded their operations to King Salmon Lake in 2004 for the second consecutive year.

A mark-recapture program has been operated annually since 1984 to estimate the above-border run size (i.e., border escapement); spawning escapement is then estimated by subtracting the inriver catch. The final 2004 estimate of border run was 127,047 sockeye salmon and the spawning escapement was estimated at 106,688 fish (Table 5). This spawning escapement was average (Appendix D.9), and was above the interim escapement goal range of 71,000 to 80,000 sockeye salmon.

The sockeye count through the Kuthai Lake weir was 1,578 fish; below average (Appendix D.10). Migration through the weir did not commence until July 24, three weeks later than average, due to an apparent blockage in the lower part of the Silver Salmon River. Approximately 24% of the run came through on this date. Opportunistic



aerial inspections indicated that the apparent blockage had worked itself out. The estimated sex composition at the weir was 63% female (n=550).

The Little Trapper Lake weir count was 9,613 sockeye; below average (Appendix D.10). The estimated sex composition was 50% female (n=750).

The Tatsamenie Lake weir count in 2004 was 1,951 sockeye salmon. This was below average. The estimated sex composition was 42% female, i.e. 825 fish (n=680). A total of 297 females and 293 males were held for broodstock; 72 females and 57 males were released in mid-October after the egg-take goal was reached. Egg-take details are presented in the enhancement section of this report.

The King Salmon weir count was 5,005 sockeye salmon, an estimated 54% of which were female. This was a follow-up to last year's pilot in which only part of the migration period was covered. This year the weir was installed on July 6 and pulled on August 29; the entire run was enumerated.

### **Chinook Salmon**

Spawning escapement of Chinook salmon in the Canadian portion of the Taku drainage was estimated from the joint Canada/U.S. mark-recapture program. Tag application occurred April 30 through mid-July. Tag recovery effort consisted of commercial, test, and aboriginal gillnet fisheries from May 2 through October 10 (statistical weeks 19 to 41) as well as spawning ground sampling in August and September. The final above-border escapement was estimated to be 77,936 large (three-ocean and older) Chinook salmon. The final spawning escapement estimate was 75,032 large fish. The spawning escapement of large Chinook salmon was above average, and above the upper end of the escapement goal range of 30,000 to 55,000 fish.

**Table 5.** Taku River sockeye salmon terminal run reconstruction, 2004. Estimates do not include spawning escapements below the U.S./Canada border.

	Taku			Snettisham Stocks		
	Total	Wild	Planted	Total	Wild	Hatchery
Escapement	106,688	105,263	1,425			
Canadian Harvest						
Commercial	20,148	19,882	266			
Food Fishery	120	118	2			
Total	20,268	20,000	268			
Test Fishery Catch	91	90	1			
Above Border Run	127,047	125,354	1,693			
U.S. Harvest <sup>a</sup>						
District 111	75,818	75,142	676	101,909	9,153	92,756
Personal Use	1,150	1,140	10			
Total	76,968	76,282	686			
Test Fishery Catch	0					
Total Run	204,015	201,636	2,380			
Taku Harvest Plan	Total	Wild	Planted			
Escapement Goal	75,000	75,000	0			
TAC	129,015	126,636	2,380			
Canada						
Base Allowable	23,984	22,794	1,190			
Surplus Allowable	1,338	1,338				
Total	25,322	24,132	1,190			
Total %	19.6%	19.1%	50.0%			
Actual	20,268	20,000	268			
Actual %	15.7%	15.8%	11.2%			
U.S.						
Total	105,031	103,841	1,190			
Total %	81.4%	82.0%	50.0%			
Actual	76,968	76,282	686			
Actual %	59.7%	60.2%	28.8%			

<sup>a</sup> U.S. harvest estimate differs from Joint Interception Committee estimate because no estimates are made for catches other than the listed fisheries.

Aerial surveys of large Chinook salmon to the six escapement index areas annually surveyed by ADF&G were as follows: Nakina 4,091 fish, Kowatua 828 fish, Tatsamenie 1,396 fish, Dudidontu 1,036 fish, Tseta, 906 fish, and Nahlin 1,787 fish (Figure 9, Appendix D.11). The total of 10,044 large Chinook salmon observed was above average.

Spawning escapement of coho salmon in the Canadian portion of the Taku drainage was estimated from the joint Canada/U.S. mark-recapture program. Tag application occurred through October 4; recovery occurred through October 10 (both dates are in statistical week 41). The tag recovery effort consisted of commercial and test gillnet fisheries. The final above-border coho run was estimated to be 141,837 fish, and the spawning escapement was estimated at 132,153 fish (Appendix C.7). The spawning escapement

was above average, and was above the upper limit of the interim escapement goal range 27,500 to 35,000 fish.

#### **Pink Salmon**

There is no program to estimate the escapement of Taku River pink salmon; however, the Canyon Island fish wheels provide an index of annual variation in border escapement. A total of 8,464 pink salmon were captured fish wheels in 2004 (Appendix D.14). This was below average.

#### **Chum Salmon**

As with pink salmon, the Canyon Island fish wheels are used to determine annual variations in border escapement. A total of 414 chum salmon were captured in the wheels in 2004; above average (Appendix D.14). The Taku River fall chum run has been depressed since 1988. It is unlikely that the spawning escapement goal of 50,000 to 80,000 chum salmon was achieved in 2004.

### **ALSEK RIVER**

Alsek River salmon stocks contribute to the U.S. commercial gillnet fisheries located in Dry Bay, at the mouth of the Alsek River (Figure 3). Unknown quantities of Alsek River origin fish are also taken in the U.S. commercial gillnet and troll fisheries in the Yakutat area. No commercial fishery exists in the Canadian portions of the Alsek River drainage, although aboriginal and recreational fisheries occur in the Tatshenshini River and some of its headwater tributaries (Figure 3).

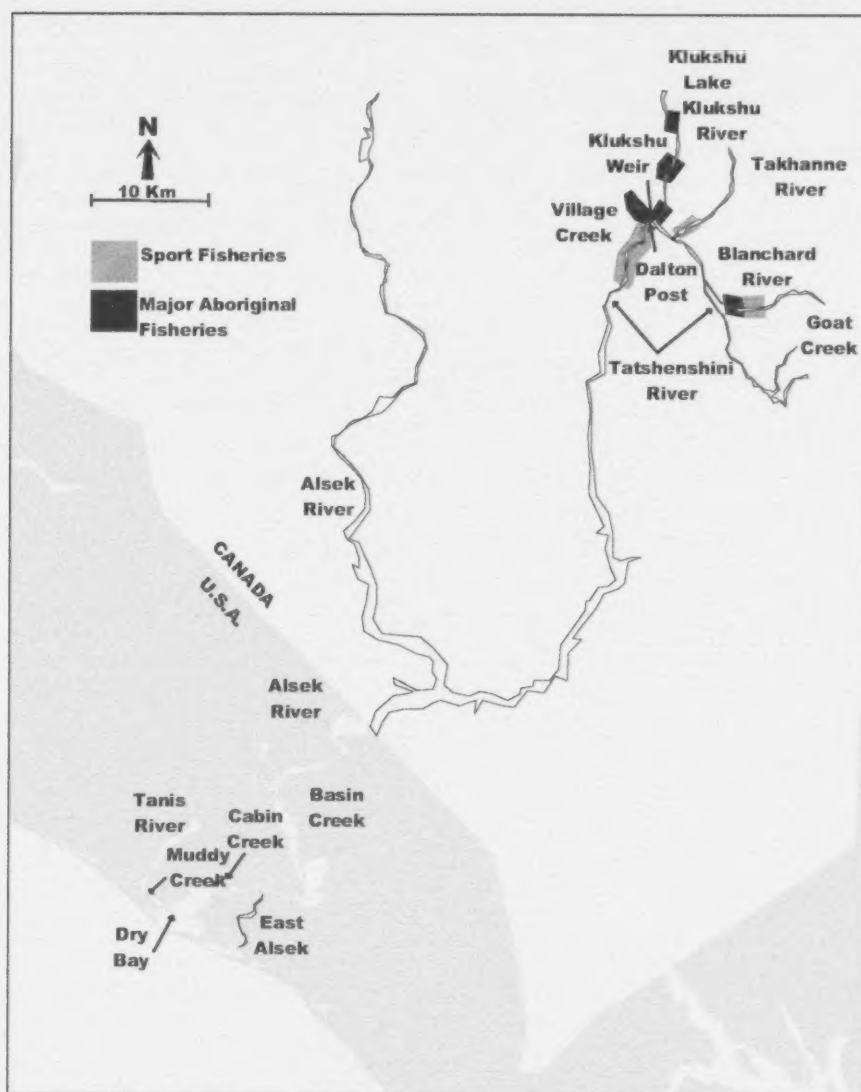


Figure 3. The Alsek River and principal U.S. and Canadian fishing areas.

### *Harvest Regulations & Management Objectives*

Although catch sharing of Alsek River salmon stocks between Canada and the U.S. has not yet been specified, Annex IV does call for the development and implementation of cooperative abundance-based management plans and programs for Alsek River Chinook salmon, sockeye salmon, and coho salmon. Interim escapement goal ranges for Alsek River sockeye salmon and coho salmon were initially set by the TTC at 33,000 to 58,000 sockeye, and 5,400 to 25,000 coho salmon. The principle escapement-monitoring tool for Chinook salmon, sockeye salmon, and coho salmon stocks on the Alsek River is the Klukshu weir, operated by DFO and the Champagne-Aishihik First Nation (CAFN). The weir has been in operation since 1976. To make the management objectives of Chinook salmon and sockeye salmon better defined, in terms of Klukshu stocks, revised goals,



expressed in terms of Klukshu stocks only, were established in 1999 and adopted again in 2004. Mark-recapture programs to estimate the total inriver abundance and the fraction of the escapement contributed by Klukshu stocks have been in operation since 1997 for Chinook salmon, and since 2000 for sockeye salmon.

The initiative to establish a specific Klukshu Chinook salmon spawning goal began in 1991 when the TTC set an interim spawning objective of 4,700 Klukshu Chinook salmon. This goal was based more on manager's intuition than on science. From 1995 through 1997, the TTC reviewed this escapement level and concluded that goal of 4,700 Chinook salmon was not supported by the data. A new goal range of 1,100 to 2,300 fish was proposed based on joint analyses of stock-recruitment data. The Parties conducted independent internal reviews of these analyses. Although there was not unanimous support for the proposal, there was agreement on establishing a minimum goal consistent with the lower end of the proposed range. As a result, Canadian and U.S. managers agreed to a minimum spawning escapement goal of 1,100 Chinook salmon for the Klukshu system for 2000, and this was used again in the 2004 season.

The stock-recruitment analysis of Klukshu sockeye salmon data has been completed and has undergone internal peer review. The new escapement goal range for Klukshu River sockeye salmon is 7,500 to 15,000 spawners per year.

#### *Preseason Forecasts*

The overall sockeye salmon run to the Klukshu River in 2004 was expected to be below average in strength. Principal contributing brood years to the 2004 run were expected to be 1999 (Klukshu escapement of 5,101 fish) and 2000 (Klukshu escapement of 5,422 fish); average Klukshu escapement was 14,204 fish. Based on historical stock-recruitment analysis, the range of Klukshu escapements that appear most likely to produce maximum sustained yields is 7,500 to 15,000 sockeye salmon.

The 2004 overall Alsek River sockeye salmon run was expected to be approximately 44,670 fish. This estimate was based on: a predicted run of 12,061 Klukshu sockeye salmon derived from the average of the historical Klukshu stock-recruitment data and an assumed Klukshu contribution of 27% (based on the 2001 to 2003 sockeye radio tagging study). A run size of this magnitude is well below the average run size estimate of 77,200 fish (based on the Klukshu weir count expanded by 1/0.27 to account for other inriver escapement and an assumed U.S. harvest rate of 20%).

The Klukshu early run sockeye salmon escapements in 1999 and 2000 were 371 fish and 237 fish, respectively (Appendix E.7). Both the 1999 and 2000 escapements were well below the optimum level of 2,500 sockeye salmon spawners as determined through separate stock-recruitment analyses by DFO of the early run. Due to the under escapement in 1999 and 2000, the early run was expected to be well below average.

The Klukshu Chinook salmon escapements in 1998 and 1999, 1,347 and 2,168 fish, respectively, were both well below average (Appendix E.7). The escapements for 1998

and 1999 were near the lower end and the upper end of the optimum escapement range of 1,100 to 2,300 Chinook salmon estimated from current stock-recruitment analysis. As a result, the preliminary outlook was for a near average run. The overall 2004 Alsek River Chinook run was expected to be approximately 15,200 fish. This estimate was based on a predicted run of 2,500 Klukshu Chinook salmon derived from the historical Klukshu stock-recruitment data and an assumed Klukshu contribution to the total run of approximately 17%.

The coho salmon escapements observed at the Klukshu River in 2000 (4,800 coho salmon, but count incomplete) and 2001 (750 coho salmon), suggests the run in 2004 would be average (Appendix E.7).

The overall sockeye run to the Klukshu River in 2003 was expected to be slightly above average in strength. Principal contributing brood years to the 2003 run were expected to be 1998 (Klukshu escapement of 13,580 fish) and 1999 (Klukshu escapement of 5,101 fish); the 1993 to 2002 average Klukshu escapement was 12,484 fish. Based on historical stock-recruitment analysis, the range of Klukshu escapements that appear most likely to produce maximum sustained yields is 7,500 to 15,000 sockeye salmon.

#### *U.S. Fisheries*

The Dry Bay commercial set-gillnet fishery harvested 656 Chinook, 18,030 sockeye, and 2,475 coho salmon (Appendices E.1 to E.4). No pink salmon were harvested, and the chum salmon harvest was minimal.

The Chinook salmon harvest was average, the sockeye and coho harvest were below average. Very little effort was recorded during the coho season due to market conditions. The number of fishing days was 76.5. The total effort expended in the fishery was 280 boat-days; below average.

The Alsek River commercial fishery opened on the first Sunday in June, statistical week 24 (June 6; Appendix E.1). The initial opening was extended to 48 hours. For the next 2 weeks of the season weekly openings were extended to 48 and 72 hours, respectively, as sockeye CPUE remained more than double the average. The fourth and fifth weekly openings were not extended beyond 24 hours when CPUE did not indicate strength to that portion of the run. During the second week of July, the weekly opening was extended to 48 hours, and was then further extended to 72 hours during the third week of July as CPUE remained strong. During the final four weeks of the sockeye season fishing time was maintained at 24 hours with the exception of statistical week 33 when fishing time was extended to 48 hours. The fishery targeted coho salmon after late August and fishing times remained at three days per week for the first three weeks of the coho season. With minimal effort and good coho CPUE, fishing time was opened until further notice to allow harvest opportunity for coho salmon. No effort was recorded on the Alsek after the first week of September.

Historically, a set gillnet fishery targeting on Chinook salmon was conducted during May and early June. Due to depressed runs, the directed fishery has been closed since 1963 and Chinook salmon have only been harvested incidentally during the sockeye salmon fishery in early June. From 1963 through 1997, the early June periods were limited in time in order to reduce the impact on Chinook salmon. With the advent of the new Chinook salmon escapement goal concern for incidentally caught Chinook salmon has diminished, therefore the management of the early June periods was based on sockeye salmon CPUE. Gillnet mesh size was restricted to a maximum of six inches through July 1.

### *Canadian Fisheries*

The aboriginal fishery harvested an estimated 139 Chinook salmon, 1,875 sockeye salmon, and no coho salmon (Figures 11 to 14, Appendices E.2 and E.6). The final estimated Chinook salmon harvest was below average. The final sockeye salmon catch was above average.

Final harvest estimates for the Tatshenshini recreational fishery were well below average for Chinook salmon with an estimated 46 retained, well above average for sockeye salmon, with an estimated harvest of 247 sockeye salmon, and near average for coho salmon, with 127 being harvested. The harvest was below average for Chinook, above average for sockeye, and average for coho salmon. By July 20<sup>th</sup>, the lower end of the Chinook escapement goal had been met and projections indicated that the upper end of the escapement goal would be exceeded; therefore, it was decided to increase the daily Chinook limit to 2 (4 in possession). The low Chinook catches may have been attributed to the changed river channel (i.e., fewer holding areas below the Tatshenshini/Klukshu rivers confluence) and to the relocation of the Klukshu weir in 2001, which has allowed migrating salmon to stage further up from Dalton Post in the Klukshu River. In addition, water levels in the Tatshenshini River were slightly above normal and turbidity was high during the peak of the Chinook migration and this may have had a negative effect on the Chinook catches. Retention of sockeye salmon in the Tatshenshini River was permitted starting on August 15<sup>th</sup> as per regulation. By September 8<sup>th</sup>, the sockeye run forecast was to exceed the upper end of the escapement goal and it was decided to increase the daily sockeye limit to 4 (8 in possession) starting on September 11<sup>th</sup>. The preliminary catch data was derived from a creel census in the Dalton Post area and a catch card program conducted by the Yukon Salmon Committee (YSC) and DFO. Weekly estimates and annual comparisons are listed in Appendices E.2 and E.6.

Management of salmon in the Yukon is a shared responsibility between DFO and the Yukon Salmon Committee (YSC). The YSC was established in 1995 pursuant to the Comprehensive Land Claim Umbrella Final Agreement between the Government of Canada, the Council for Yukon Indians and the Government of the Yukon. The Committee is a public board consisting of ten members, 70% of which are appointed by Yukon First Nations. Two CAFN members sit on the YSC. Although the Committee currently operates by consensus, the voting structure of the Committee is organized so

that, should a vote be necessary, 50% of the votes reside with appointees of Yukon First Nations.

The 2004 Alsek-Tatshenshini management plan, adopted by CAFN, YSC, and DFO, was based on the objectives described in the *Harvest Regulations & Management Objectives* section above. For Chinook salmon and early run sockeye salmon management, the status of the Klukshu weir counts was to be reviewed on or about July 18 to ensure weir and spawning escapement targets were on track. The status of the late run sockeye salmon would be reviewed the first week of September. Adjustments to inseason fishing regimes in the recreational and aboriginal fisheries would be made if deemed necessary. Other key elements of the plan are described below.

The center of aboriginal fishing activity in the Alsek River drainage occurs at the CAFN village of Klukshu, on the Haines road, about 60 km south of Haines Junction. Salmon are harvested by means of gaff and traditional fish traps as the fish migrate up the Klukshu River into Klukshu Lake. The fishing plan for the aboriginal fishery in the Klukshu River for the period prior to August 15 allowed fishing by means of fish traps for 2 days per week. After August 15, it was planned that the traps would be fished 3 days per week. Conservation thresholds that might invoke restrictions in the Aboriginal fishery were projected Klukshu weir counts of <1,100 Chinook salmon, and <1,500 early sockeye salmon. Gaff fisheries also exist on Village Creek and in the headwaters of the Tatshenshini River and tributaries thereof (Goat Creek, Stanley Creek, Parton River, and the Blanchard River). The plan did not restrict the gaff fishery, other than to reserve Goat Creek, Stanley Creek, and the Parton River for elders only.

The majority of the recreational fishing effort on this drainage occurs on the Tatshenshini River, at and just downstream of the mouth of the Klukshu River in the vicinity of the abandoned settlement of Dalton Post. The management plan prohibited the retention of sockeye salmon in the recreational fishery prior to August 15 unless the weir count projection for the early run was >4,500 sockeye salmon. The Chinook salmon daily catch limit was one fish and the possession limit was 2 fish. For other salmon species, the daily catch and possession limits were 2 and 4 fish, respectively. However, the aggregate limit for all salmon combined was 2 salmon per day, 4 fish in possession. Starting in 2003, recreational salmon fishing was permitted in the Tatshenshini River seven days a week; this fishery had previously been open from 6:00 am Saturday to 12:00 noon Tuesday each week. Headwater areas upstream of the British Columbia/Yukon border were to be closed for the season to protect spawning Chinook salmon. Conservation thresholds that were expected to invoke additional restrictions in the recreational fishery were projected Klukshu weir counts of <1,500 Chinook salmon and < 10,600 sockeye salmon (early and late runs combined).

A mandatory Yukon Salmon Conservation Catch Card (YSCCC), introduced by the YSC in 1999, was required by all recreational salmon fishers in 2004. The purpose of the YSCCC is to improve harvest estimates and to serve as a statistical base to ascertain the importance of salmon to the Yukon recreational fishery. Anglers are required to report



their catch via mail by the late fall. Information requested includes the number, sex, size, date and location of salmon caught and released.

Since 2001, CAFN has imposed a fishing area closure from the Klukshu River Bridge crossing up to the new weir location to allow for better staging opportunities for salmon in the vicinity of the Klukshu/Tatshenshini confluence.

### *Escapement*

Total drainage abundance programs are being implemented as part of the development of abundance-based management regimes and to accurately assess whether the system-wide escapement goals for Alsek River Chinook salmon and sockeye salmon stocks are appropriate and if so, are being achieved. At this time, there are no programs in place to estimate the drainage-wide coho salmon escapement. A large and variable proportion of the escapement of each species is enumerated at the weir on the Klukshu River. Current escapement monitoring programs including the Klukshu weir, Village Creek electronic counter, and aerial surveys allow annual comparisons of escapement indices. The most reliable long-term comparative escapement index for Alsek River drainage salmon stocks is the Klukshu River weir count. Escapements for 2004 are shown in Table 6.

### **Sockeye Salmon**

The final weir count was 15,348 and escapement estimate was 13,721 of Klukshu River sockeye salmon (Table 6; Appendices E.3 and E.7). The count of 3,464 early run fish (count through August 15) was above average while the count of 11,884 late run fish was average. The total escapement was near the, and was in the upper end of the recommended escapement goal range of 7,500 to 15,000 fish. The sockeye salmon escapement estimate at the Village Creek counters of 2,278 fish in 2004; was below average (Appendix E.9).

**Table 6.** Harvest and Kluksu index escapement data for Alsek River sockeye, Chinook, and coho salmon for 2004.

	Sockeye	Chinook	Coho
Inriver Run from Mark-Recapture	68,917	7,565	N/A
Escapement Index <sup>a</sup>			
Kluksu Weir Count	15,348	2,525	750
Kluksu Escapement	13,721	2,445	750
Harvest <sup>b</sup>			
U.S. Commercial	18,030	656	2,475
U.S. Subsistence	224	51	21
Canadian Sport	162	77	95
Canadian Aboriginal	1,875	139	0
Total	20,291	923	2,591

<sup>a</sup> Kluksu River salmon stocks represent a large and variable portion of the total Alsek River salmon escapement.

<sup>b</sup> U.S. harvest estimate differs from Joint Interception Committee estimate because no estimates are made for catches other than the listed fisheries.

A sockeye salmon mark-recapture program was initiated in 2000 to explore the feasibility of developing an abundance-based management regime for Alsek River sockeye salmon and this was continued through 2004. The final modified Petersen estimate of the inriver run above Dry Bay was 70,171 sockeye salmon ( $m=1086$ ,  $r=54$ ,  $c=3,548$ ), with a 95% confidence interval of 54,011 to 91,057 fish; Appendix E.8). The Kluksu weir count therefore represented approximately 22% of the total Alsek inriver sockeye run in 2004. The estimated contribution of Nesketahen sockeye salmon to the total Alsek River run was approximately 3%.

Historical aerial survey counts for other Alsek River index tributaries are listed in Appendix E.9.

### Chinook Salmon

The most reliable comparative Chinook salmon escapement index for the Alsek River drainage is the Kluksu River weir count. The final Chinook weir count was 2,525 and escapement estimate was 2,445 (Table 6), and both were average (Appendix E.7). The 2004 escapement was above the revised interim escapement goal range of 1,100 to 2,300 Kluksu Chinook salmon.

Aerial Chinook salmon surveys were again flown in 2003. The count of 84 Chinook salmon in the Blanchard River was below average, there was no survey flown for Goat Creek, and the count of 46 fish for the Takhanne River was below average (Appendix E.10).

A Chinook salmon mark-recapture study was conducted again in 2004. The final estimate of inriver run past Dry Bay for Alsek River Chinook salmon was 7,565 large fish (Appendix E.11). The Kluksu escapement of 2,376 large fish represents approximately 33.9% of the total large Chinook escapement.

## **Coho Salmon**

The Klukshu coho weir count and escapement of 750 fish below average (Table 6). The weir was removed prior to the completion of the coho salmon run and does not include fish that migrate after mid-October. (Appendix E.12)

## ***Sockeye salmon Run Reconstruction***

Estimates of the Klukshu River contribution to the sockeye salmon run to the Alsek River drainage vary from 14.1% from the mark-recapture study in 2000 to 38.1% from the mark-recapture study done in 2003 (Appendix E.8). For 2004, the final estimate of the inriver run above Alsek Lake was 70,171 sockeye salmon (Table 6). The Canadian aboriginal and recreational catch estimates of 2,122 fish left a spawning escapement of 68,049 fish. The estimated U.S. subsistence and commercial catch of 18,030 sockeye salmon added to the inriver run produce a final Alsek total run estimate of 88,201 sockeye salmon (Appendix E.8).

## **ENHANCEMENT ACTIVITIES**

### ***Egg Collection***

In 2004, sockeye salmon eggs were collected at Tahltan Lake on the Stikine River for the seventeenth year, and in the Tatsamenie Lake system on the Taku River, for the fifteenth year of this program.

#### **Tahltan Lake**

The egg collection was contracted to Arc Environmental Ltd. for the eighth consecutive year. The second large escapement since 1996 provided good numbers of brood stock. Collection of fish was much easier in comparison with recent years. An estimated 5.7 million eggs were collected from 1,936 females and a similar number of males (Appendix F.1). The estimated egg collection was based on eyed-egg processing completed at the hatchery; the average fecundity was 2,785 eggs per female. The brood stock was collected by beach seine at the major spawning site, as has been done in most years. Fish were not collected from other sites due to several constraints. The eggs were collected on thirteen distinct egg-take days. Eggs collected on September 1 and 13 were delayed in shipment to the hatchery by one and 2 days due to weather. The egg-take goal at Tahltan Lake was 6.0 million eggs.

#### **Tatsamenie Lake**

Tatsamenie Lake sockeye brood stock was captured for the tenth year at an adult enumeration weir located at the outlet of Tatsamenie Lake. Egg collection was again contracted to B. Mercer and Associates Ltd. A total of 210 females and 148 males were held prior to the first egg take on September 19. The held brood stock represented 30% of the 2004 sockeye escapement (1,357 fish) into Tatsamenie Lake (Appendix C.9). An estimated 0.75 million eggs were collected (based on a hatchery estimate of egg counts and a fecundity of 4,223 eggs per female) from 210 females and milt was collected from

148 males during 6 egg collections. Mortality of held fish included 48 females and 83 males; the remaining 129 females and 113 males not used for gamete collection were released on October 18 and it was not known if any of the fish spawned successfully. Investigation of a passive flow incubator continued at the lake with 195,500 eggs collected from 46 females and placed in the incubator on October 10.

#### ***Incubation, Thermal Marking, and Fry Plants (2003 Brood Year)***

The egg incubation and thermal-marking program at Snettisham Hatchery went smoothly in year 2003/2004. Snettisham hatchery is operated by DIPAC (Douglas Island Pink and Chum, Inc.), a private aquaculture organization in Juneau. A co-operative agreement between ADF&G and DIPAC provides for Snettisham hatchery to serve the needs of the joint TBR enhancement projects.

Incubation of 2003 brood eggs took place at Snettisham Hatchery and the resultant fry were transported to the appropriate systems from May 21 to June 12, 2004. An estimated 484,000 Tatsamenie Lake sockeye salmon fry in three incubators were lost to the IHN virus.

#### **Tahltan Lake**

A total of 1.266 (Appendix F.1) million fry from the 2003 Tahltan sockeye egg take was planted back into Tahltan Lake in 2004 (Appendix F.1 and F.2). Survival from green-egg to outplanted fry was 93.7%. Fry outplanting took place from May 21 to May 28 (Appendix F.1).

#### **Tuya Lake**

There were 3.2 million sockeye fry planted in Tuya Lake on June 12, 2004. These fish were from eggs collected at Tahltan Lake in the fall of 2003. Survival from green-egg to outplanted fry was 88.4% (Appendix F.2).

#### **Tatsamenie Lake**

A total of 0.92 million sockeye fry from the 2003 egg-take was released into Tatsamenie Lake in 2004, and an additional 0.442 million fry were placed in a net pen in the lake for feeding, but were lost to IHNV. Survival from green-egg to outplanted-fry was 53.6% (Appendix F.3). Low survival was partially due to loss of three incubators to IHNV. Outplanting took place from May 21 to May 27.

The loss of Tatsamenie fry to IHNV both during incubation at Snettisham and during the net pen rearing at Tatsamenie Lake is an expected consequence of the culture of sockeye salmon. The strategy of compartmentalization and isolation provides assurance that losses are kept to a minimum. The incidence in of the IHN virus in the brood stock was one of the highest we have seen in 2003.

The Appendix F tables summarize enhancement activities for 2004 and prior years.



### ***Outplant Evaluation Surveys***

#### **Acoustic, Trawl, Beach seine and Limnological Sampling**

In 2004, surveys were directed by the Salmon Indexing Methods Unit of Stock Assessment Division of the Pacific Biological Station (PBS) and the Yukon/Transboundary Stock Assessment section of Fisheries and Oceans Canada. Limnological, beach seine, hydroacoustic and trawl surveys were conducted at Tatsamenie Lake by B. Mercer & Associates. A spring limnological survey that included beach seining was conducted by B. Mercer & Associates at Tuya Lake and an early August survey that included index netting, hydroacoustic surveys and trawling was conducted by the PBS. Limnological and beach seine surveys were performed at Tahltan Lake by onsite Fisheries and Oceans Canada (DFO) personnel.

#### **ADF&G Thermal Mark Laboratory**

During the 2004 season the ADFG thermal mark lab received otoliths from 13,085 sockeye salmon collected by ADFG and DFO staff as part of the U.S./Canada fry-planting evaluation program. These collections came from commercial and test fisheries in U.S. waters and in Canadian fisheries on the Taku and Stikine Rivers over a 12-week period. In addition, several escapement samples were examined. Combined, the laboratory processed 12,976 of the otoliths received (99%) and provided estimates on hatchery contributions for almost 100 distinct sampling collections. Of these totals, 2,260 otoliths were identified and classified as belonging to one of 30 marked groups. Estimates of the percentage of hatchery fish contributed to commercial fishery catches were provided to ADF&G and DFO fishery managers 24 to 48 hours after samples arrived at the lab.

Adult sockeye salmon otoliths were processed inseason by the ADF&G otolith lab to estimate the weekly contribution of planted sockeye salmon to the District 106, 108, and 111 gillnet fisheries and to Canadian commercial fisheries in the Stikine and Taku Rivers. Contributions of planted sockeye salmon stocks to catches were as follows: 16,832 planted Stikine River fish to District 106 and 108, and 794 planted Taku River fish to District 111 (includes inriver personal use fishery). Contributions of planted sockeye salmon stocks in the Canadian fisheries included 16,800 to Stikine River fisheries and 283 planted Taku River fish to the Taku River fisheries.

#### **Canadian Thermal Mark Laboratory**

Sub-samples of juvenile and adult otolith samples collected at the study lakes during the 2004 season were analyzed at the DFO thermal mark lab in Whitehorse.

### **APPENDICES**

#### ***Standards***

Large Chinook salmon are MEF length  $\geq 660$

Unless otherwise stated Chinook salmon are large

Data not available to estimate catches of Alaska Hatchery pink and chum salmon

All catches of Tahltan, Trapper, and Tatsamenie, unless otherwise noted, include both wild and hatchery fish.

**Appendix A. 1. Weekly salmon catch in the Alaskan District 106 commercial drift gillnet fisheries, 2004.**

Effort may be less than the sum of effort from 106-41&42 and 106-30 because some boats fished in more than one subdistrict.

Week	Start Date	Catch					Effort		
		Chinook	Sockeye	Coho	Pink	Chum	Permits	Days	Permit Days
25	13-Jun	195	1,204	1,057	159	968	16	3.0	48
26	20-Jun	465	8,853	4,479	2,419	3,323	33	3.0	99
27	27-Jun	801	27,770	16,933	7,546	6,294	56	5.0	280
28	4-Jul	287	17,814	12,611	6,599	5,093	67	3.0	201
29	11-Jul	383	20,900	14,748	27,221	13,165	68	4.0	272
30	18-Jul	172	9,922	7,325	15,253	7,825	70	3.0	210
31	25-Jul	227	9,713	7,361	26,000	12,366	70	2.0	140
32	1-Aug	69	13,774	7,618	50,773	14,465	50	4.0	200
33	8-Aug	20	3,906	5,402	62,275	7,100	46	4.0	184
34	15-Aug	18	866	3,090	15,517	2,784	27	4.0	108
35	22-Aug	20	582	5,487	20,903	6,841	46	4.0	184
36	29-Aug	23	450	9,145	8,804	9,743	64	3.0	192
37	5-Sep	23	408	14,446	1,728	12,430	83	2.0	166
38	12-Sep	18	71	15,488	37	5,631	66	3.0	198
39	19-Sep	8	24	9,906	3	2,080	53	3.0	159
40	26-Sep	4	2	3,313	0	440	29	3.0	87
41	3-Oct	2	0	222	0	26	4	2.0	8
Total		2,735	116,259	138,631	245,237	110,574		55.0	2,736

**Alaska Hatchery Contributions for Large Chinook and Coho**

		Large Chinook		Coho	
		Hatchery	Wild	Hatchery	Wild
Alaska Hatchery Contributions					
25	13-Jun	67	128	797	260
26	20-Jun	118	347	1,929	2,550
27	27-Jun	786	15	10,393	6,540
28	4-Jul	0	287	6,722	5,889
29	11-Jul	0	383	6,310	8,438
30	18-Jul	0	172	1,292	6,033
31	25-Jul	300	-73	1,082	6,279
32	1-Aug	0	69	1,562	6,056
33	8-Aug	10	10	249	5,153
34	15-Aug	0	18	157	2,933
35	22-Aug	0	20	268	5,219
36	29-Aug	0	23	1,201	7,944
37	5-Sep	0	23	3,394	11,052
38	12-Sep	0	18	5,253	10,235
39	19-Sep	0	8	6,335	3,571
40	26-Sep	0	4	2,556	757
41	3-Oct	0	2	0	222
Total		1,281	1,454	49,501	89,130

**Appendix A. 2. Weekly stock proportions and catches of sockeye salmon harvested in the Alaskan District 106 commercial drift gillnet fisheries, 2004.**

Data based on scale pattern analysis and thermal marks.

Week	Alaska	Canada	Stikine				Planted Tahltan	CPUE of Stikine Fish			
			Tahltan	Tuya	Mainstem	Total		Tahltan	Tuya	Mainstem	Total
Proportions											
25	0.352	0.409	0.146	0.060	0.034	0.239	0.076	0.026	0.116	0.065	0.036
26	0.208	0.317	0.404	0.028	0.042	0.475	0.178	0.260	0.197	0.290	0.257
27	0.268	0.224	0.488	0.020	0.000	0.508	0.182	0.348	0.154	0.000	0.306
28	0.436	0.204	0.299	0.028	0.032	0.360	0.151	0.191	0.195	0.222	0.194
29	0.602	0.209	0.144	0.026	0.019	0.189	0.064	0.080	0.157	0.111	0.088
30	0.798	0.111	0.074	0.013	0.003	0.091	0.014	0.025	0.049	0.013	0.026
31	0.721	0.207	0.062	0.003	0.007	0.072	0.006	0.031	0.018	0.036	0.030
32	0.667	0.246	0.059	0.016	0.012	0.087	0.005	0.029	0.085	0.063	0.036
33	0.708	0.230	0.022	0.000	0.041	0.062	0.009	0.003	0.000	0.066	0.008
34	0.489	0.363	0.031	0.011	0.106	0.148	0.000	0.002	0.007	0.066	0.007
35	0.375	0.403	0.066	0.024	0.131	0.221	0.000	0.002	0.006	0.032	0.004
36	0.338	0.435	0.060	0.016	0.151	0.227	0.000	0.001	0.003	0.027	0.003
37	0.566	0.240	0.097	0.065	0.032	0.194	0.000	0.002	0.012	0.006	0.003
38	0.475	0.318	0.082	0.045	0.080	0.207	0.000	0.000	0.001	0.002	0.000
39	0.477	0.316	0.082	0.046	0.079	0.207	0.000	0.000	0.001	0.001	0.000
40	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.000	0.000	0.000	0.000
Total	0.499	0.222	0.241	0.020	0.018	0.279	0.095				
Catches											
25	424	492	176	72	40	288	91	3.7	1.5	0.8	6.0
26	1,841	2,809	3,579	251	372	4,202	1,579	36.2	2.5	3.8	42.4
27	7,439	6,214	13,560	557	0	14,117	5,061	48.4	2.0	0.0	50.4
28	7,775	3,626	5,331	505	577	6,413	2,682	26.5	2.5	2.9	31.9
29	12,576	4,371	3,011	551	391	3,953	1,338	11.1	2.0	1.4	14.5
30	7,919	1,105	730	134	35	898	136	3.5	0.6	0.2	4.3
31	7,002	2,009	604	32	65	701	58	4.3	0.2	0.5	5.0
32	9,193	3,389	811	218	163	1,192	70	4.1	1.1	0.8	6.0
33	2,764	898	86	0	158	244	36	0.5	0.0	0.9	1.3
34	423	315	27	9	92	128	0	0.2	0.1	0.8	1.2
35	218	235	39	14	77	129	0	0.2	0.1	0.4	0.7
36	152	196	27	7	68	102	0	0.1	0.0	0.4	0.5
37	231	98	39	26	13	79	0	0.2	0.2	0.1	0.5
38	34	23	6	3	6	15	0	0.0	0.0	0.0	0.1
39	11	8	2	1	2	5	0	0.0	0.0	0.0	0.0
40	1	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Total	58,005	25,787	28,027	2,382	2,058	32,466	11,051	139.0	12.9	13.0	164.9



**Appendix A. 3.** Weekly salmon catch and effort in the Alaskan subdistricts 106-41 and 106-42 (Sumner Strait) commercial drift gillnet fishery, 2004.

Week	Start Date	Catch					Effort		
		Chinook	Sockeye	Coho	Pink	Chum	Permits	Days	Permit Days
25	13-Jun	195	1,204	1,057	159	968	16	3.0	48
26	20-Jun	431	8,618	4,008	2,244	3,265	31	3.0	93
27	27-Jun	584	25,425	13,078	6,013	5,846	46	5.0	230
28	4-Jul	78	14,348	5,084	4,689	3,593	46	3.0	138
29	11-Jul	139	15,090	5,418	19,513	11,039	42	4.0	168
30	18-Jul	22	5,596	3,038	9,439	6,024	44	3.0	132
31	25-Jul	9	5,529	3,769	11,560	8,584	35	2.0	70
32	1-Aug	10	6,679	4,663	29,269	7,535	29	4.0	116
33	8-Aug	8	2,330	4,066	39,817	5,583	26	4.0	104
34	15-Aug	1	449	1,936	5,249	1,862	17	4.0	68
35	22-Aug	0	176	3,643	4,055	5,179	32	4.0	128
36	29-Aug	3	90	4,346	439	3,755	40	3.0	120
37	5-Sep	18	338	7,769	148	4,988	58	2.0	116
38	12-Sep	2	41	8,215	30	2,266	45	3.0	135
39	19-Sep	4	14	7,147	3	1,442	34	3.0	102
40	26-Sep	2	2	2,624	0	362	23	3.0	69
41	3-Oct	2	0	222	0	26	4	2.0	8
Total		1,508	85,929	80,083	132,627	72,317		55.0	1,845

**Appendix A. 4.** Weekly stock proportions and catches of sockeye salmon harvested in the Alaskan District 106-41 and 106-42 (Sumner Strait) commercial drift gillnet fisheries, 2004.

Data based on scale pattern analysis and thermal marks.

Week	Alaska	Canada	Stikine			Planted	CPUE of Stikine Fish				
			Tahltan	Tuya Mainstem	Total		Tahltan	Tahltan	Tuya	Mainstem	Total
Proportions											
25	0.352	0.409	0.146	0.060	0.034	0.239	0.076	0.021	0.092	0.065	0.030
26	0.192	0.321	0.415	0.029	0.043	0.487	0.182	0.222	0.166	0.307	0.223
27	0.219	0.229	0.531	0.022	0.000	0.552	0.194	0.339	0.149	0.000	0.302
28	0.349	0.212	0.364	0.035	0.040	0.440	0.175	0.219	0.225	0.320	0.226
29	0.525	0.224	0.188	0.037	0.026	0.250	0.069	0.098	0.201	0.179	0.111
30	0.751	0.111	0.107	0.024	0.006	0.137	0.024	0.026	0.062	0.020	0.029
31	0.722	0.178	0.082	0.006	0.012	0.100	0.010	0.038	0.028	0.072	0.039
32	0.652	0.250	0.086	0.012	0.000	0.098	0.010	0.029	0.043	0.000	0.028
33	0.736	0.205	0.037	0.000	0.022	0.059	0.016	0.005	0.000	0.038	0.007
34	0.604	0.348	0.028	0.021	0.000	0.048	0.000	0.001	0.008	0.000	0.002
35	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.001	0.007	0.000	0.001
36	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.000	0.004	0.000	0.001
37	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.002	0.014	0.000	0.003
38	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.000	0.001	0.000	0.000
39	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.000	0.001	0.000	0.000
40	0.628	0.187	0.107	0.078	0.000	0.185	0.000	0.000	0.000	0.000	0.000
Total	0.413	0.227	0.315	0.026	0.018	0.359	0.122	0.855	0.081	0.064	1.000
Catches											
25	424	492	176	72	40	288	91	3.7	1.5	0.8	6.0
26	1,653	2,769	3,572	251	372	4,195	1,567	38.4	2.7	4.0	45.1
27	5,563	5,816	13,489	557	0	14,046	4,944	58.6	2.4	0.0	61.1
28	5,001	3,038	5,226	505	577	6,308	2,508	37.9	3.7	4.2	45.7
29	7,927	3,385	2,836	551	391	3,778	1,048	16.9	3.3	2.3	22.5
30	4,204	623	601	134	35	769	136	4.6	1.0	0.3	5.8
31	3,991	986	455	32	65	552	58	6.5	0.5	0.9	7.9
32	4,355	1,668	575	81	0	656	70	5.0	0.7	0.0	5.7
33	1,714	478	86	0	52	137	36	0.8	0.0	0.5	1.3
34	271	156	12	9	0	22	0	0.2	0.1	0.0	0.3
35	111	33	19	14	0	33	0	0.1	0.1	0.0	0.3
36	57	17	10	7	0	17	0	0.1	0.1	0.0	0.1
37	212	63	36	26	0	62	0	0.3	0.2	0.0	0.5
38	26	8	4	3	0	8	0	0.0	0.0	0.0	0.1
39	9	3	1	1	0	3	0	0.0	0.0	0.0	0.0
40	1	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Total	35,521	19,534	27,098	2,244	1,532	30,874	10,458	173.1	16.3	13.0	202.2

**Appendix A. 5.** Weekly salmon catch and effort in the Alaskan subdistrict 106-30 (Clarence Strait) commercial drift gillnet fishery, 2004.

Week	Start Date	Catch					Effort		
		Chinook	Sockeye	Coho	Pink	Chum	Permits	Days	Permit Days
26	27-Jun	34	235	471	175	58	2	3.0	6
27	4-Jul	217	2,345	3,855	1,533	448	10	5.0	50
28	11-Jul	209	3,466	7,527	1,910	1,500	21	3.0	63
29	18-Jul	244	5,810	9,330	7,708	2,126	26	4.0	104
30	25-Jul	150	4,326	4,287	5,814	1,801	27	3.0	81
31	1-Aug	218	4,184	3,592	14,440	3,782	37	2.0	74
32	8-Aug	59	7,095	2,955	21,504	6,930	26	4.0	104
33	15-Aug	12	1,576	1,336	22,458	1,517	20	4.0	80
34	22-Aug	17	417	1,154	10,268	922	14	4.0	56
35	29-Aug	20	406	1,844	16,848	1,662	15	4.0	60
36	5-Sep	20	360	4,799	8,365	5,988	26	3.0	78
37	12-Sep	5	70	6,677	1,580	7,442	25	2.0	50
38	19-Sep	16	30	7,273	7	3,365	22	3.0	66
39	26-Sep	4	10	2,759	0	638	20	3.0	60
40	3-Oct	2	0	689	0	78	7	3.0	21
Total		1,227	30,330	58,548	112,610	38,257		55.0	953

**Appendix A. 6. Weekly stock proportions and catches of sockeye salmon harvested in the Alaskan District 106-30 (Clarence Strait) commercial drift gillnet fisheries, 2004.**

Data based on scale pattern analysis and thermal marks.

Week	Alaska	Canada	Stikine			Planted	Tahltan	CPUE of Stikine Fish			
			Tahltan	Tuya Mainstem	Total			Tahltan	Tuya Mainstem	Total	
Proportions											
26	0.800	0.170	0.030	0.000	0.000	0.030	0.050	0.093	0.000	0.000	0.056
27	0.800	0.170	0.030	0.000	0.000	0.030	0.050	0.111	0.000	0.000	0.067
28	0.800	0.170	0.030	0.000	0.000	0.030	0.050	0.131	0.000	0.000	0.078
29	0.800	0.170	0.030	0.000	0.000	0.030	0.050	0.133	0.000	0.000	0.080
30	0.859	0.111	0.030	0.000	0.000	0.030	0.000	0.125	0.000	0.000	0.075
31	0.720	0.245	0.036	0.000	0.000	0.036	0.000	0.158	0.000	0.000	0.095
32	0.682	0.243	0.033	0.019	0.023	0.076	0.000	0.178	0.000	0.222	0.244
33	0.666	0.266	0.000	0.000	0.068	0.068	0.000	0.000	0.000	0.188	0.063
34	0.365	0.380	0.034	0.000	0.220	0.254	0.000	0.020	0.000	0.232	0.090
35	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.026	0.000	0.181	0.076
36	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.018	0.000	0.123	0.052
37	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.005	0.000	0.037	0.016
38	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.002	0.000	0.012	0.005
39	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.001	0.000	0.004	0.002
40	0.266	0.497	0.049	0.000	0.188	0.237	0.000	0.000	0.000	0.000	0.000
Total	0.741	0.206	0.031	0.005	0.017	0.053	0.020	0.603	0.063	0.335	1.000
Catches											
26	188	40	7	0	0	7	12	1.2	0.0	0.0	1.2
27	1,876	398	71	0	0	71	117	1.4	0.0	0.0	1.4
28	2,773	588	105	0	0	105	173	1.7	0.0	0.0	1.7
29	4,649	986	175	0	0	175	291	1.7	0.0	0.0	1.7
30	3,715	482	129	0	0	129	0	1.6	0.0	0.0	1.6
31	3,011	1,024	149	0	0	149	0	2.0	0.0	0.0	2.0
32	4,838	1,721	236	138	163	537	0	2.3	1.3	1.6	5.2
33	1,050	420	0	0	106	106	0	0.0	0.0	1.3	1.3
34	152	158	14	0	92	106	0	0.3	0.0	1.6	1.9
35	108	202	20	0	77	96	0	0.3	0.0	1.3	1.6
36	96	179	18	0	68	85	0	0.2	0.0	0.9	1.1
37	19	35	3	0	13	17	0	0.1	0.0	0.3	0.3
38	8	15	1	0	6	7	0	0.0	0.0	0.1	0.1
39	3	5	0	0	2	2	0	0.0	0.0	0.0	0.0
40	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0
Total	22,485	6,253	929	138	526	1,593	593	12.7	1.3	7.1	21.1



**Appendix A. 7. Weekly salmon catch and effort in the Alaskan District 108 commercial drift gillnet fishery, 2004.**

The permit days are adjusted for boats which did not fish the entire opening and are less than the sum of the permits times the

Week	Start Date	Catch					Effort		Permit Days
		Chinook	Sockeye	Coho	Pink	Chum	Permits	Days	
25	13-Jun	1,897	1,343	28	22	33	31	3.0	93.0
26	20-Jun	1,766	17,978	744	27	755	55	5.0	180.0
27	27-Jun	1,509	18,612	611	50	755	48	5.0	240.0
28	4-Jul	1,193	33,591	812	1,984	7,013	83	5.0	282.0
29	11-Jul	485	23,351	1,407	5,371	9,298	61	4.0	244.0
30	18-Jul	480	7,087	670	4,866	7,379	49	3.0	147.0
33	8-Aug	6	608	618	1,927	4,503	16	4.0	64.0
34	15-Aug	0	382	1,129	2,177	1,664	21	4.0	84.0
35	22-Aug	21	256	3,719	3,543	2,007	27	4.0	108.0
36	29-Aug	20	134	3,349	420	1,291	28	3.0	84.0
37	5-Sep	9	35	2,281	47	829	22	2.0	44.0
38	12-Sep	3	12	6,741	5	1,829	49	3.0	147.0
39	19-Sep	5	3	3,469	0	545	27	3.0	81.0
40	26-Sep	15	0	757	0	79	8	3.0	24.0
41	3-Oct	1	0	104	0	16	4	2.0	8.0
Total		7,410	103,392	26,439	20,439	37,996	529	53.0	1,830

**Alaska Hatchery Contributions for Large Chinook and Coho**

		Large Chinook		Coho	
		Hatchery	Wild	Hatchery	Wild
25	13-Jun	240	1,657	0	28
26	20-Jun	706	1,060	512	232
27	27-Jun	254	1,255	0	611
28	4-Jul	285	908	0	812
29	11-Jul	283	202	0	1,407
30	18-Jul	119	361	0	670
33	8-Aug	0	6		618
34	15-Aug	0	0	0	1,129
35	22-Aug	0	21	0	3,719
36	29-Aug	0	20	0	3,349
37	5-Sep	0	9	107	2,174
38	12-Sep	0	3	138	6,603
39	19-Sep	0	5	970	2,499
40	26-Sep	3	12	363	394
41	3-Oct	0	1	357	-253
Total		1,890	5,520	2,447	23,992

**Appendix A. 8. Weekly stock proportions and stock-specific catch of sockeye salmon in the Alaskan District 108 commercial drift gillnet fishery, 2004.**

Data based on scale pattern analysis and thermal marks.

Week	Alaska	Canada	Stikine				Planted Tahltan	CPUE of Stikine Fish			
			Tahltan	Tuya Mainstem	Total	Tahltan		Tuya Mainstem	Total		
Proportions											
25	0.031	0.016	0.572	0.027	0.354	0.954	0.187	0.029	0.042	0.046	0.034
26	0.044	0.024	0.812	0.023	0.096	0.931	0.271	0.289	0.245	0.086	0.231
27	0.047	0.005	0.760	0.021	0.166	0.948	0.371	0.210	0.179	0.115	0.187
28	0.103	0.015	0.630	0.009	0.244	0.883	0.270	0.267	0.110	0.259	0.261
29	0.143	0.036	0.456	0.024	0.342	0.822	0.186	0.155	0.249	0.292	0.196
30	0.198	0.076	0.285	0.015	0.426	0.726	0.092	0.049	0.080	0.183	0.087
33	0.381	0.459	0.000	0.046	0.114	0.160	0.000	0.000	0.047	0.010	0.004
34	0.381	0.459	0.000	0.046	0.114	0.160	0.000	0.000	0.022	0.005	0.002
35	0.239	0.601	0.000	0.046	0.114	0.160	0.000	0.000	0.012	0.002	0.001
36	0.239	0.601	0.000	0.046	0.114	0.160	0.000	0.000	0.008	0.002	0.001
37	0.239	0.601	0.000	0.046	0.114	0.160	0.000	0.000	0.004	0.001	0.000
38	0.239	0.601	0.000	0.046	0.114	0.160	0.000	0.000	0.000	0.000	0.000
39	0.239	0.601	0.000	0.046	0.114	0.160	0.000	0.000	0.000	0.000	0.000
Total	0.100	0.030	0.613	0.018	0.239	0.869	0.252	0.698	0.023	0.279	1.000
Catch											
25	41	21	769	37	476	1,281	250	8.3	0.4	5.1	13.8
26	797	440	14,606	409	1,726	16,741	4,870	81.1	2.3	9.6	93.0
27	880	88	14,151	398	3,094	17,644	6,902	59.0	1.7	12.9	73.5
28	3,445	498	21,158	287	8,202	29,647	9,058	75.0	1.0	29.1	105.1
29	3,328	830	10,642	563	7,988	19,193	4,342	43.6	2.3	32.7	78.7
30	1,400	540	2,021	109	3,017	5,147	650	13.8	0.7	20.5	35.0
33	232	279	0	28	69	97	0	0.0	0.4	1.1	1.5
34	146	175	0	17	44	61	0	0.0	0.2	0.5	0.7
35	61	154	0	12	29	41	0	0.0	0.1	0.3	0.4
36	32	81	0	6	15	21	0	0.0	0.1	0.2	0.3
37	8	21	0	2	4	6	0	0.0	0.0	0.1	0.1
38	3	7	0	1	1	2	0	0.0	0.0	0.0	0.0
39	1	2	0	0	0	0	0	0.0	0.0	0.0	0.0

**Appendix A. 9.** Weekly salmon catch and effort in the Canadian commercial fishery in the lower Stikine River, 2004.

No test fishery

**Appendix A. 10.** Weekly sockeye salmon stock proportions, and catch by stock in the Canadian commercial fishery in the lower Stikine River, 2004.

Week	Start Date	Catch						Effort		
		Chinook		Sockeye	Coho	Pink	Chum	Permits	Days	Permit Days
		Large	non large							
26	20-Jun	313	333	281	0	0	0	9.67	3.0	29.0
27	27-Jun	607	559	5,187	0	0	0	11.00	4.0	44.0
28	4-Jul	1,109	699	24,320	0	0	0	11.00	7.0	77.0
29	11-Jul	318	363	22,886	1	0	2	11.14	7.0	78.0
30	18-Jul	70	99	9,116	0	0	0	11.00	4.0	44.0
31	25-Jul	37	15	7,243	5	0	46	11.00	4.0	44.0
32	1-Aug	22	2	6,186	57	0	46	11.00	5.0	55.0
33	8-Aug	5	0	2,275	168	0	29	8.50	4.0	34.0
34	15-Aug	0	0	30	11	2	8	7.00	2.0	14.0
35	22-Aug	0	0	5	20	1	2	5.00	1.0	5.0
36	29-Aug	0	0	1	3	4	1	2.00	1.0	2.0
37	5-Sep	0	0	0	6	1	0	5.00	1.0	5.0
Total		2,481	2,070	77,530	271	8	134		43.0	431.0



**Appendix A. 11. Weekly sockeye salmon stock proportions and catch by stock in the Canadian commercial fishery in the lower Stikine River, 2004.**

Sex specific age compositions were calculated and the stock composition of the females sampled for egg diameters was expanded to the catch by age. If no fishery, commercial catch from comparable week is used

No fishery, commercial catch from comparable week is used										
Week	Proportion				Planted	Catch			Tahltan	
	Small Egg	Tahltan	Tuya	Mainstem		Tahltan	Tuya	Mainstem	Wild	Planted
26	0.904	0.861	0.043	0.096	0.238	242	12	27	175	67
27	0.913	0.859	0.053	0.087	0.431	4,458	276	453	2,224	2,234
28	0.887	0.871	0.016	0.113	0.362	21,194	379	2,747	12,388	8,806
29	0.772	0.749	0.023	0.228	0.291	17,152	527	5,207	10,502	6,650
30	0.677	0.669	0.008	0.323	0.200	6,096	73	2,947	4,275	1,821
31	0.465	0.465	0.000	0.535	0.224	3,367	0	3,876	1,748	1,619
32	0.321	0.321	0.000	0.679	0.121	1,983	0	4,203	1,237	746
33	0.156	0.153	0.004	0.844	0.080	347	9	1,919	166	181
34	0.000	0.056	0.000	0.944	0.000	2	0	28	2	0
35	0.000	0.000	0.000	0.944	0.000	0	0	5	0	0
36	0.000	0.000	0.000	0.944	0.000	0	0	1	0	0
Total						54,841	1,276	21,413	32,717	22,124
Proportion						0.707	0.016	0.276	0.422	0.285
Week	Catch/Effort below Porcupine			Total	Small Egg	CPUE			Tahltan	
	Sockeye	Permit Day	CPUE			Tahltan	Tuya	Mainstem	Wild	Planted
26	281	29	9,690	8,759	8,345	0.414	0.931	6.034	2.310	
27	5,187	44	117,886	107,591	101,318	6.273	10.295	50.545	50.773	
28	23,146	73	317,068	281,255	276,314	4.941	35.814	161.507	114.807	
29	17,566	66	266,152	205,597	199,468	6.129	60.555	122.132	77.336	
30	7,090	36	196,944	133,277	131,700	1.577	63.668	92.358	39.341	
31	5,879	41	143,390	66,657	66,657	0.000	76.733	34.605	32.051	
32	5,697	52	109,558	35,120	35,120	0.000	74.438	21.908	13.212	
33	2,275	34	66,912	10,471	10,206	0.265	56.441	4.882	5.324	
34	30	14	2,143	0.000	0.119	0.000	2.024	0.119	0.000	
35	5	5	1,000	0.000	0.000	0.000	0.944	0.000	0.000	
36	1	2	0.500	0.000	0.000	0.000	0.472	0.000	0.000	
37		5								
Total						67,157	401	1231,243	848,726	829,246
Proportion						0.689	0.669	0.021	0.311	0.401

**Appendix A. 12. Weekly salmon catch and effort in the Canadian commercial fishery in the upper Stikine River, 2004.**

Week	Start Date	Catch					Effort		
		Chinook		Sockeye	Coho	Pink	Chum	Permits	Days
		Large	non large						
28	4-Jul	0	0	5				1.0	1.0
29	11-Jul	0	0	200				1.0	3.0
30	18-Jul	0	0	289				1.0	3.0
31	25-Jul	0	1	132				1.0	4.0
Total		0	1	626	0	0	0	4.0	11.0

**Appendix A. 13.** Weekly salmon catch and effort in the Canadian Aboriginal fishery located at Telegraph Creek, on the Stikine River, and the Chinook salmon sport fishery on the Tahltan River, 2004.

Week	Start Date	Catch						Effort		
		Chinook		Sockeye	Coho	Pink	Chum	Permits	Days	Permit Days
		Large	non large							
20	9-May	2	3	0	0	0	0	1.33	3	4.0
21	16-May	2	1	0	0	0	0	1.50	2.0	3.0
22	23-May	12	42	0	0	0	0	2.00	6.0	12.0
23	30-May	19	133	0	0	0	0	5.14	7.0	36.0
24	6-Jun	22	117	1	0	0	0	2.57	7.0	18.0
25	13-Jun	33	95	1	0	0	0	2.71	7.0	19.0
26	20-Jun	37	100	10	0	0	0	2.57	7.0	18.0
27	27-Jun	19	55	6	0	0	0	2.33	6.0	14.0
28	4-Jul	133	163	147	0	0	0	7.17	6.0	43.0
29	11-Jul	107	218	2,013	0	0	0	12.14	7.0	85.0
30	18-Jul	46	156	2,185	0	0	0	13.86	7.0	97.0
31	25-Jul	38	170	1,427	0	0	0	9.57	7.0	67.0
32	1-Aug	7	29	600	0	0	0	6.86	7.0	48.0
33	8-Aug	19	91	224	3	0	0	5.43	7.0	38.0
34	15-Aug	0	53	242	1	0	0	5.8	6.0	35.0
35	22-Aug	0	0	6	0	0	0	1.0	1	1.0
Total		497	1,425	6,862	4	0	0		93	538.0

Tahltan Sport Fishery					
Week	Start Date	Rod <sup>a</sup> Hours	Chinook		
			Retained	Released	Total
26	20-Jun	2	0	0	0
27	27-Jun	23	32	0	32
28	4-Jul	26	3	0	3
29	11-Jul	75	27	17	43
30	18-Jul	80	11	23	34
31	25-Jul	81	11	13	24
32	1-Aug	24	3	1	4
Total		311	88	54	142

<sup>a</sup> Weekly catches and effort were expanded by 10% because the creel census was not conducted throughout the entire chinook salmon migration.

**Appendix A. 14.** Catch by stock and week for the sockeye salmon harvested in the Canadian upper river commercial and Aboriginal fisheries in the Stikine River, 2004.

Week	Start Date	Stock			Tahltan	
		Tahltan	Tuya	Mainstem	Wild	Planted
Catch by stock for upper river commercial fishery						
24	6-Jun					
25	13-Jun					
26	20-Jun					
27	27-Jun					
28	4-Jul	4	0	0	3	1
29	11-Jul	142	26	33	77	65
30	18-Jul	281	0	7	140	141
31	25-Jul	112	16	6	81	31
32	1-Aug					
33	8-Aug					
34	15-Aug					
35	22-Aug					
Total		539	42	46	301	238
Catch by stock for upper river aboriginal fishery						
24	6-Jun	1	0	0	1	0
25	13-Jun	1	0	0	1	0
26	20-Jun	8	2	0	9	1
27	27-Jun	6	0	0	6	0
28	4-Jul	126	21	0	106	20
29	11-Jul	1,363	262	336	766	780
30	18-Jul	2,134	0	51	1,067	1,092
31	25-Jul	1,198	163	59	868	352
32	1-Aug	493	107	0	320	173
33	8-Aug	166	16	39	87	99
34	15-Aug	191	36	12	115	83
35	22-Aug	3	1	2	0	4
Total		5,690	608	499	3,346	2,605

**Appendix A. 15.** Weekly salmon catch and effort in the Canadian test fishery in the Stikine River, 2004.

Week	Start Date	Catch					# Drifts/ Chum Set Hours	
		Chinook	non large	Sockeye	Coho	Pink		
Drift gillnet								
26	20-Jun	21	17	70	0	0	0	42
27	27-Jun	18	10	129	0	0	0	28
30	18-Jul	1	1	64	1	3	8	29
31	25-Jul	0	1	60	1	5	12	28
32	1-Aug	0	0	24	0	2	4	14
33	8-Aug	0	0	32	9	1	8	28
34	15-Aug	0	0	14	18	2	7	28
35	22-Aug	1	0	7	35	0	26	42
36	29-Aug	0	0	9	68	2	11	70
37	5-Sep	0	0	8	61	0	2	56
38	12-Sep	0	0	1	79	0	1	84
39	19-Sep	0	0	1	35	0	0	84
40	26-Sep	0	0	1	28	0	1	84
41	3-Oct	0	0	0	10	0	0	84
42	10-Oct	0	0	0	7	0	0	77
Total		41	29	420	352	15	80	778
Set gillnet								
26	20-Jun	27	13	73	0	0	0	60
27	27-Jun	8	8	279	0	0	0	48
28	4-Jul	2	1	57	0	0	0	12
29	11-Jul	0	0	0	0	0	0	0
30	18-Jul	0	0	82	0	0	4	36
31	25-Jul	0	0	129	2	5	15	48
32	1-Aug	0	0	59	3	5	3	24
33	8-Aug	1	0	113	19	8	12	48
34	15-Aug	1	0	74	25	4	56	48
35	22-Aug	0	0	37	68	15	9	72
36	29-Aug	0	0	15	18	4	4	128
Total		39	22	918	135	41	103	524
Total Test Fishery Catch								
26	20-Jun	48	30	143	0	0	0	42
27	27-Jun	26	18	408	0	0	0	28
28	4-Jul	2	1	57	0	0	0	0
29	11-Jul	0	0	0	0	0	0	0
30	18-Jul	1	1	146	1	3	12	29
31	25-Jul	0	1	189	3	10	27	28
32	1-Aug	0	0	83	3	7	7	14
33	8-Aug	1	0	145	28	9	20	28
34	15-Aug	1	0	88	43	6	63	28
35	22-Aug	1	0	44	103	15	35	42
36	29-Aug	0	0	24	86	6	15	70
37	5-Sep	0	0	8	61	0	2	56
38	12-Sep	0	0	1	79	0	1	84
39	19-Sep	0	0	1	35	0	0	84
40	26-Sep	0	0	1	28	0	1	84
41	3-Oct	0	0	0	10	0	0	84
42	10-Oct	0	0	0	7	0	0	77
Total Test Catch		80	51	1,338	487	56	183	1,302



# **Appendix A. 16. Weekly catch, CPUE, and migratory timing of Tahltan, Tuya, and mainstem sockeye stocks in the Stikine test fishery, 2004.**

Sex specific age compositions were calculated and the smoothed stock compositions of the females sampled for egg diameters was expanded to the catch by age.  
If no test fishery, commercial catch from comparable week is used.

Week	Proportions			Catch			CPUE				Migratory Timing		
	Tahltan	Tuya	Mainstem	Tahltan	Tuya	Mainstem	Tahltan	Tuya	Mainstem	Total	Tahltan	Tuya	Mainstem
Drift gillnet													
26	0.853	0.070	0.077	60	5	5	1.422	0.117	0.128	1.667	0.063	0.005	0.006
27	0.809	0.056	0.135	104	7	17	3.726	0.260	0.621	4.607	0.165	0.012	0.028
28	0.807	0.035	0.158	0	0	0	3.325	0.145	0.651	4.120	0.148	0.006	0.029
29	0.625	0.041	0.334	0	0	0	2.467	0.163	1.319	3.950	0.110	0.007	0.059
30	0.442	0.048	0.510	28	3	33	0.976	0.105	1.126	2.207	0.043	0.005	0.050
31	0.312	0.011	0.677	19	1	41	0.669	0.023	1.451	2.143	0.030	0.001	0.064
32	0.217	0.000	0.783	5	0	19	0.372	0.000	1.343	1.714	0.017	0.000	0.060
33	0.172	0.000	0.828	6	0	26	0.197	0.000	0.946	1.143	0.009	0.000	0.042
34	0.148	0.000	0.852	2	0	12	0.074	0.000	0.426	0.500	0.003	0.000	0.019
35	0.101	0.000	0.899	1	0	6	0.017	0.000	0.150	0.167	0.001	0.000	0.007
36	0.101	0.000	0.899	1	0	8	0.013	0.000	0.116	0.129	0.001	0.000	0.005
37	0.101	0.000	0.899	1	0	7	0.014	0.000	0.128	0.143	0.001	0.000	0.006
38	0.101	0.000	0.899	0	0	1	0.001	0.000	0.011	0.012	0.000	0.000	0.000
39	0.101	0.000	0.899	0	0	1	0.001	0.000	0.011	0.012	0.000	0.000	0.000
40	0.101	0.000	0.899	0	0	1	0.001	0.000	0.011	0.012	0.000	0.000	0.000
Total				227	16	178	13.276	0.812	8.437	22.525			
Proportion				0.540	0.038	0.423					0.589	0.036	0.375
Set gillnet													
26	0.853	0.070	0.077	62	5	6	1.038	0.085	0.094	1.217	0.044	0.004	0.004
27	0.809	0.056	0.135	226	16	38	4.701	0.328	0.784	5.813	0.198	0.014	0.033
28	0.807	0.035	0.158	46	2	9	3.833	0.167	0.750	4.750	0.162	0.007	0.032
29	0.625	0.041	0.334										
30	0.442	0.048	0.510	36	4	42	1.007	0.108	1.162	2.278	0.042	0.005	0.049
31	0.312	0.011	0.677	40	1	87	0.839	0.028	1.820	2.688	0.035	0.001	0.077
32	0.217	0.000	0.783	13	0	46	0.533	0.000	1.925	2.458	0.022	0.000	0.081
33	0.172	0.000	0.828	19	0	94	0.406	0.000	1.948	2.354	0.017	0.000	0.082
34	0.148	0.000	0.852	11	0	63	0.228	0.000	1.314	1.542	0.010	0.000	0.055
35	0.101	0.000	0.899	4	0	33	0.052	0.000	0.462	0.514	0.002	0.000	0.019
36	0.101	0.000	0.899	2	0	13	0.012	0.000	0.105	0.117	0.001	0.000	0.004
Total				459	28	431	12.649	0.716	10.364	23.730			
Proportion				0.500	0.031	0.469					0.533	0.030	0.437
Additional Drifts													

Total Test Fishery Catches							Tahltan			
							Wild	Plant	Wild	Plant
26	0.853	0.070	0.077	122	10	11	0.519	0.344	73	49
27	0.809	0.056	0.135	330	23	55	0.479	0.355	185	145
28	0.807	0.035	0.158	46	2	9	0.534	0.355	26	20
29	0.625	0.041	0.334	0	0	0	0.495	0.280	0	0
30	0.442	0.048	0.510	65	7	74	0.381	0.158	42	23
31	0.312	0.011	0.677	59	2	128	0.138	0.124	36	23
32	0.217	0.000	0.783	18	0	65	0.048	0.095	10	8
33	0.172	0.000	0.828	25	0	120	0.000	0.069	19	6
34	0.148	0.000	0.852	13	0	75	0.086	0.096	0	13
35	0.101	0.000	0.899	4	0	40	0.073	0.038	1	3
36	0.101	0.000	0.899	2	0	22	0.000	0.061	0	3
37	0.101	0.000	0.899	1	0	7	0.000	0.000	1	0
38	0.101	0.000	0.899	0	0	1	0.052	0.000	0	0
39	0.101	0.000	0.899	0	0	1	0.052	0.000	0	0
40	0.101	0.000	0.899	0	0	1	0.052	0.000	0	0
41	0.101	0.000	0.899	0	0	0	0.052	0.000	0	0
42	0.101	0.000	0.899	0	0	0	0.052	0.000	0	0
Total				686	44	608			392	293
Proportion				0.512	0.033	0.455				

**Appendix A. 17.** Daily counts of adult sockeye salmon, and annual estimates of wild and hatchery sockeye salmon passing through Tahltan Lake weir, 2004.

Date	Count <sup>a</sup>	Cumulative		Date	Count	Cumulative	
		Count	Percent			Count	Percent
7-Jul	Installed			13-Aug	662	59,193	93.4
8-Jul	0	0	0.0	14-Aug	593	59,786	94.3
9-Jul	0	0	0.0	15-Aug	490	60,276	95.1
10-Jul	0	0	0.0	16-Aug	470	60,746	95.9
11-Jul	0	0	0.0	17-Aug	290	61,036	96.3
12-Jul	5	5	0.0	18-Aug	200	61,236	96.6
13-Jul	0	5	0.0	19-Aug	122	61,358	96.8
14-Jul	3	8	0.0	20-Aug	153	61,511	97.1
15-Jul	0	8	0.0	21-Aug	134	61,645	97.3
16-Jul	9	17	0.0	22-Aug	243	61,888	97.7
17-Jul	15	32	0.1	23-Aug	113	62,001	97.8
18-Jul	73	105	0.2	24-Aug	35	62,036	97.9
19-Jul	1,263	1,368	2.2	25-Aug	122	62,158	98.1
20-Jul	4,963	6,331	10.0	26-Aug	112	62,270	98.3
21-Jul	7,816	14,147	22.3	27-Aug	67	62,337	98.4
22-Jul	4,947	19,094	30.1	28-Aug	34	62,371	98.4
23-Jul	5,838	24,932	39.3	29-Aug	64	62,435	98.5
24-Jul	5,570	30,502	48.1	30-Aug	82	62,517	98.7
25-Jul	4,128	34,630	54.6	31-Aug	116	62,633	98.8
26-Jul	2,128	36,758	58.0	1-Sep	139	62,772	99.1
27-Jul	2,455	39,213	61.9	2-Sep	215	62,987	99.4
28-Jul	2,013	41,226	65.1	3-Sep	21	63,008	99.4
29-Jul	2,849	44,075	69.5	4-Sep	69	63,077	99.5
30-Jul	1,317	45,392	71.6	5-Sep	41	63,118	99.6
31-Jul	695	46,087	72.7	6-Sep	85	63,203	99.7
1-Aug	1,165	47,252	74.6	7-Sep	59	63,262	99.8
2-Aug	1,611	48,863	77.1	8-Sep	19	63,281	99.9
3-Aug	1,551	50,414	79.6	9-Sep	24	63,305	99.9
4-Aug	981	51,395	81.1	10-Sep	0	63,305	99.9
5-Aug	1,001	52,396	82.7	11-Sep	34	63,339	99.9
6-Aug	1,189	53,585	84.6	12-Sep	7	63,346	100.0
7-Aug	1,170	54,755	86.4	13-Sep	0	63,346	100.0
8-Aug	747	55,502	87.6	14-Sep	26	63,372	100.0
9-Aug	906	56,408	89.0	15-Sep	0	63,372	100.0
10-Aug	622	57,030	90.0	16-Sep		63,372	100.0
11-Aug	742	57,772	91.2	17-Sep		63,372	100.0
12-Aug	759	58,531	92.4				
				Hatchery <sup>a</sup> Wild Total			
Total Counted				63,372			
Fish removed for broodstock							
				female	-2,091		
				male	-2,092		
				rejects	-66		
					-1,250	-2,993	-4,243
Fish removed for otolith samples					-195	-225	-420
Total Spawners					29,994	28,715	58,709

<sup>a</sup> Includes an estimated 2,285 thermally marked Tuya fish.

**Appendix A. 18.** Daily counts of sockeye salmon smolt migrating through Tahltan Lake smolt weir, 2004.

Date	Count	Cumulative	
		Count	Percent
6-May	0	0	0.0
7-May	0	0	0.0
8-May	0	0	0.0
9-May	0	0	0.0
10-May	14	14	0.0
11-May	1,019	1,033	0.0
12-May	28,410	29,443	1.4
13-May	5,528	34,971	1.7
14-May	12,934	47,905	2.3
15-May	15,636	63,541	3.0
16-May	12,952	76,493	3.6
17-May	61,762	138,255	6.5
18-May	62,267	200,522	9.5
19-May	313,155	513,677	24.3
20-May	429,549	943,226	44.6
21-May	553,011	1,496,237	70.7
22-May	181,220	1,677,457	79.2
23-May	9,981	1,687,438	79.7
24-May	209,793	1,897,231	89.6
25-May	52,674	1,949,905	92.1
26-May	45,133	1,995,038	94.3
27-May	30,803	2,025,841	95.7
28-May	15,996	2,041,837	96.5
29-May	32,469	2,074,306	98.0
30-May	7,539	2,081,845	98.4
31-May	9,259	2,091,104	98.8
1-Jun	6,656	2,097,760	99.1
2-Jun	4,171	2,101,931	99.3
3-Jun	4,773	2,106,704	99.5
Total			

Date	Count	Cumulative	
		Count	Percent
4-Jun	1,701	2,108,405	99.6
5-Jun	473	2,108,878	99.6
6-Jun	554	2,109,432	99.7
7-Jun	2,651	2,112,083	99.8
8-Jun	1,642	2,113,725	99.9
9-Jun	1,247	2,114,972	99.9
10-Jun	498	2,115,470	99.9
11-Jun	340	2,115,810	100.0
12-Jun	284	2,116,094	100.0
13-Jun	164	2,116,258	100.0
14-Jun	99	2,116,357	100.0
15-Jun	79	2,116,436	100.0
16-Jun	53	2,116,489	100.0
17-Jun	24	2,116,513	100.0
18-Jun	74	2,116,587	100.0
19-Jun	97	2,116,684	100.0
20-Jun	17	2,116,701	100.0
Wild		825,513	
Hatchery		1,291,188	
Total		2,116,701	

**Appendix A. 19. Daily counts of adult Chinook salmon passing through Little Tahltan Weir, 2004.**

Date	Large Chinook			Chinook non large		
	Count	Cumulative		Count	Cumulative	
		Count	Percent		Count	Percent
19-Jun	35	35	0.2	0	0	0.0
20-Jun	141	176	1.1	0	0	0.0
21-Jun	22	198	1.2	1	1	0.4
22-Jun	82	280	1.7	0	1	0.4
23-Jun	27	307	1.9	1	2	0.8
24-Jun	106	413	2.5	0	2	0.8
25-Jun	156	569	3.5	1	3	1.2
26-Jun	134	703	4.3	0	3	1.2
27-Jun	200	903	5.5	1	4	1.6
28-Jun	288	1,191	7.3	1	5	2.0
29-Jun	102	1,293	7.9	0	5	2.0
30-Jun	129	1,422	8.7	1	6	2.4
1-Jul	16	1,438	8.8	0	6	2.4
2-Jul	0	1,438	8.8	0	6	2.4
3-Jul	227	1,665	10.2	2	8	3.2
4-Jul	182	1,847	11.3	1	9	3.6
5-Jul	158	2,005	12.2	2	11	4.4
6-Jul	159	2,164	13.2	1	12	4.8
7-Jul	3	2,167	13.2	0	12	4.8
8-Jul	28	2,195	13.4	0	12	4.8
9-Jul	273	2,468	15.1	0	12	4.8
10-Jul	683	3,151	19.2	4	16	6.4
11-Jul	379	3,530	21.5	7	23	9.2
12-Jul	137	3,667	22.4	2	25	10.0
13-Jul	491	4,158	25.4	2	27	10.8
14-Jul	841	4,999	30.5	36	63	25.2
15-Jul	473	5,472	33.4	23	86	34.4
16-Jul	839	6,311	38.5	16	102	40.8
17-Jul	255	6,566	40.1	6	108	43.2
18-Jul	911	7,477	45.6	13	121	48.4
19-Jul	672	8,149	49.7	10	131	52.4
20-Jul	385	8,534	52.1	6	137	54.8
21-Jul	111	8,645	52.8	4	141	56.4
22-Jul	322	8,967	54.7	6	147	58.8
23-Jul	423	9,390	57.3	3	150	60.0
24-Jul	1,212	10,602	64.7	32	182	72.8
25-Jul	229	10,831	66.1	6	188	75.2
26-Jul	440	11,271	68.8	5	193	77.2
27-Jul	1,113	12,384	75.6	13	206	82.4
28-Jul	730	13,114	80.1	9	215	86.0
29-Jul	1,019	14,133	86.3	7	222	88.8
30-Jul	258	14,391	87.9	2	224	89.6
31-Jul	415	14,806	90.4	3	227	90.8
1-Aug	117	14,923	91.1	2	229	91.6
2-Aug	267	15,190	92.7	1	230	92.0
3-Aug	123	15,313	93.5	1	231	92.4
4-Aug	235	15,548	94.9	1	232	92.8
5-Aug	145	15,693	95.8	2	234	93.6
6-Aug	140	15,833	96.7	2	236	94.4
7-Aug	155	15,988	97.6	4	240	96.0
8-Aug	220	16,208	98.9	3	243	97.2
9-Aug	97	16,305	99.5	4	247	98.8
10-Aug	4	16,309	99.6	0	247	98.8
11-Aug	72	16,381	100.0	3	250	100.0
Total Counted		16,381			250	
Broodstock		0				
Escapement		16,381			250	



**Appendix B. 1. Salmon catch and effort in the Alaskan District 106 commercial drift gillnet fisheries, 1960-2004.**

Effort may be less than the sum of effort from 106-41/42 and 106-30 since some boats fished in more than one area.

Year	Catch					Effort	
	Chinook	Sockeye	Coho	Pink	Chum	Permit Days	Days Open
1960	46	10,354	336	1,246	502	369	17
1961	416	20,614	14,934	124,236	64,479	1,737	57
1962	1,308	47,033	42,276	256,620	59,119	4,693	52
1963	1,560	80,767	52,103	514,596	90,103	5,589	51
1964	2,082	76,541	64,654	443,086	44,218	5,383	49
1965	1,802	87,749	75,728	625,848	27,658	4,507	51
1966	1,665	89,847	62,823	400,932	40,756	4,978	74
1967	1,318	86,385	17,670	91,609	26,370	2,511	27
1968	1,316	64,671	67,151	169,107	61,366	4,965	52
1969	877	70,318	10,280	197,073	10,903	2,112	31
1970	785	42,778	35,470	94,892	32,231	1,863	41
1971	1,336	53,202	48,085	527,975	37,680	2,774	47
1972	2,573	101,338	93,427	89,467	72,382	3,321	41
1973	1,931	71,995	38,447	303,621	87,729	3,300	26
1974	1,926	57,346	45,651	104,403	50,309	2,179	28
1975	2,587	32,051	30,962	203,015	23,968	1,649	18
1976	384	15,481	19,126	139,439	6,868	827	22
1977	671	67,023	8,401	419,107	13,300	1,381	28
1978	274	41,574	55,578	224,715	16,545	1,510	27
1979	2,720	66,373	28,083	648,212	35,507	2,703	31
1980	580	107,422	16,666	45,662	26,291	1,324	25
1981	1,565	182,001	22,614	437,573	34,296	2,926	26
1982	1,648	193,798	31,481	25,533	18,646	1,700	23
1983	567	48,842	62,442	208,290	20,144	1,453	31
1984	892	91,653	41,359	343,255	70,258	1,890	31
1985	1,687	264,987	91,188	584,953	69,673	2,673	31
1986	1,704	145,709	194,912	308,484	82,289	3,510	31
1987	836	136,427	34,534	243,482	42,025	1,767	20
1988	1,104	92,529	13,103	69,559	69,620	1,495	19
1989	1,544	192,734	92,385	1,101,194	67,351	3,222	34
1990	2,108	185,805	164,235	319,186	73,232	3,502	34
1991	2,055	144,104	198,160	133,566	124,630	3,620	39
1992	1,355	203,155	298,935	94,248	140,468	4,230	40
1993	992	205,955	231,038	537,960	134,601	4,353	38
1994	754	211,048	267,862	179,994	176,026	4,468	43
1995	951	207,298	170,561	448,163	300,078	3,657	34
1996	644	311,100	223,640	188,035	283,290	5,290	46
1997	1,075	168,518	77,550	789,051	186,456	3,668	39
1998	518	113,435	273,197	502,655	332,022	4,398	43
1999	518	104,878	203,262	490,716	448,367	4,943	50
2000	1,220	90,076	96,207	156,619	199,836	2,409	33
2001	1,057	164,013	188,465	825,330	282,910	3,854	50
2002	446	56,135	226,560	82,951	112,541	5,299	47.0
2003	422	116,904	212,057	470,697	300,253	6,744	59.0
Averages							
60-03	1,223	111,863	96,445	321,963	99,939	3,199	37.2
94-03	761	154,341	193,936	413,421	262,178	4,473	44.4
2004	2,735	116,259	138,631	245,237	110,574	2,736	55.0

**Appendix B.1. (continued). Page 2 of 2.****Alaska Hatchery Contributions of Large Chinook and Coho salmon**

	Large Chinook		Coho	
	Hatchery	Wild	Hatchery	Wild
1989	512	1,032	5,029	87,356
1990	1,009	1,099	50,354	113,881
1991	608	1,447	64,067	134,093
1992	658	697	112,824	186,111
1993	305	687	77,914	153,124
1994	402	352	36,805	231,057
1995	353	598	27,333	143,228
1996	324	320	55,218	168,422
1997	369	706	19,479	58,071
1998	290	228	101,129	172,068
1999	189	329	82,828	120,434
2000	790	430	48,169	48,038
2001	446	611	67,378	121,087
2002	161	285	78,485	148,075
2003	192	230	93,454	118,603
Averages				
89-03	441	603	61,364	133,576
2004	1,281	1,454	49,501	89,130

**Appendix B. 2.** Stock proportions and catches of sockeye salmon in the Alaskan District 106 commercial drift gillnet fisheries, 1982-2004.

Catches do not include Blind Slough terminal area harvest Data based on scale pattern analysis								
Year	Alaska	Canada	Stikine			Tahltan		
			Tahltan	Tuya Mainstem	Total	Wild	Planted	
Proportions								
1982	0.486	0.319				0.194		
1983	0.668	0.217	0.103		0.013	0.116		
1984	0.658	0.269	0.029		0.044	0.074		
1985	0.479	0.419	0.091		0.011	0.102		
1986	0.689	0.293	0.014		0.004	0.018		
1987	0.827	0.155	0.010		0.007	0.017		
1988	0.874	0.106	0.020		0.001	0.020		
1989	0.657	0.311	0.006		0.026	0.032		
1990	0.608	0.371	0.005		0.016	0.021		
1991	0.545	0.331	0.100		0.024	0.124		
1992	0.595	0.232	0.070		0.102	0.172		
1993	0.400	0.338	0.098		0.164	0.262		
1994	0.579	0.254	0.142		0.025	0.167	0.108	0.033
1995	0.316	0.560	0.081	0.001	0.043	0.124	0.044	0.036
1996	0.531	0.268	0.166	0.028	0.007	0.201	0.147	0.019
1997	0.576	0.271	0.058	0.079	0.016	0.153	0.037	0.021
1998	0.598	0.307	0.015	0.080	0.000	0.095	0.013	0.002
1999	0.671	0.092	0.057	0.061	0.118	0.237	0.054	0.003
2000	0.643	0.233	0.020	0.085	0.019	0.124	0.017	0.003
2001	0.525	0.332	0.039	0.079	0.025	0.143	0.029	0.010
2002	0.758	0.098	0.037	0.072	0.035	0.144	0.024	0.012
2003	0.742	0.096	0.075	0.053	0.035	0.162	0.039	0.036
Averages								
83-03	0.616	0.264	0.059		0.035	0.119		
94-03	0.594	0.251	0.069	0.060	0.032	0.155	0.051	0.017
2004	0.499	0.222	0.241	0.020	0.018	0.279	0.144	0.097
Catches								
1982	94,275	61,853				37,670		
1983	32,603	10,589	5,020		631	5,650		
1984	60,278	24,624	2,673		4,078	6,751		
1985	126,914	111,015	24,045		3,013	27,058		
1986	100,337	42,685	2,081		606	2,687		
1987	112,893	21,190	1,376		968	2,344		
1988	80,868	9,784	1,813		64	1,877		
1989	126,603	59,959	1,111		5,061	6,172		
1990	112,983	68,921	915		2,986	3,901		
1991	78,533	47,707	14,364		3,501	17,864		
1992	120,977	47,207	14,187		20,784	34,971		
1993	82,300	69,617	20,204		33,833	54,037		
1994	122,118	53,683	29,876		5,371	35,247	22,857	7,019
1995	65,544	116,075	16,715	125	8,839	25,679	9,182	7,533
1996	165,221	83,271	51,598	8,821	2,189	62,608	45,826	5,772
1997	97,101	45,665	9,764	13,232	2,756	25,752	6,281	3,483
1998	67,890	34,811	1,678	9,020	36	10,734	1,477	201
1999	70,363	9,696	5,988	6,427	12,404	24,819	5,700	288
2000	57,935	20,996	1,827	7,612	1,706	11,145	1,573	254
2001	86,078	54,512	6,339	12,965	4,119	23,423	4,747	1,592
2002	42,573	5,487	2,055	4,058	1,962	8,075	1,375	680
2003	86,720	11,264	8,736	6,145	4,039	18,920	4,550	4,186
Averages								
83-03	90,325	45,179	10,589		5,664	19,510		
94-03	86,154	43,546	13,458	7,601	4,342	24,640	10,357	3,101
2004	58,006	25,787	28,027	2,382	2,058	32,467	16,721	11,306

**Appendix B. 3.** Salmon catch and effort in Alaskan Subdistrict 106-41/42 (Sumner Strait) commercial drift gillnet fishery, 1960-2004.

Year	Catch					Effort	
	Chinook	Sockeye	Coho	Pink	Chum	Permit Days	Days Open
1960	24	9,005	277	1,103	362	251	17
1961	75	9,488	1,851	26,435	9,657	359	48
1962	131	19,692	6,548	45,987	9,544	811	44
1963	310	45,305	15,727	135,503	50,380	2,311	47
1964	316	52,943	27,338	183,402	22,913	2,344	49
1965	679	58,736	30,570	162,271	15,763	1,658	51
1966	690	65,721	30,792	96,287	24,235	2,080	74
1967	668	60,148	10,573	52,284	19,626	1,463	27
1968	1,010	50,212	46,111	82,012	39,001	2,997	52
1969	607	46,258	6,094	92,075	6,393	1,147	31
1970	420	26,812	15,153	29,102	18,092	905	41
1971	671	33,991	24,727	283,739	19,329	1,619	50
1972	1,747	74,745	60,827	40,644	46,511	2,152	41
1973	1,540	55,254	24,921	160,297	62,486	2,253	26
1974	1,342	46,760	28,889	57,296	38,045	1,579	28
1975	467	19,319	4,650	29,340	7,762	515	17
1976	237	9,319	10,367	20,251	2,301	366	19
1977	202	47,408	1,819	51,038	4,240	447	17
1978	274	1,422	26,762	9,546	3,142	389	27
1979	458	34,807	12,087	176,395	16,816	952	25
1980	205	48,434	10,894	17,068	15,176	596	16
1981	598	132,293	13,161	220,194	25,682	1,732	25
1982	648	121,563	21,193	10,392	11,891	1,083	22
1983	268	28,153	41,208	74,347	13,001	875	32
1984	136	27,372	19,124	99,807	28,461	587	32
1985	538	172,088	50,577	319,379	45,566	1,726	38
1986	421	85,247	104,328	105,347	48,471	1,896	32
1987	441	79,165	17,776	117,059	25,877	978	20
1988	452	57,337	6,349	10,894	42,210	815	18
1989	581	107,886	55,671	418,044	40,156	1,716	34
1990	759	104,922	94,526	84,543	42,474	1,827	34
1991	844	89,355	136,990	64,334	85,435	2,118	39
1992	743	146,608	190,885	38,483	100,666	2,630	40
1993	458	129,859	134,902	296,986	96,995	2,728	38
1994	456	157,526	191,695	66,225	125,826	2,988	43
1995	663	133,713	109,613	154,004	189,369	2,349	34
1996	487	223,784	159,319	70,620	162,872	3,623	46
1997	829	118,675	52,917	414,619	100,612	2,402	39
1998	334	79,052	175,124	196,403	200,892	2,999	43
1999	397	73,378	130,083	277,194	284,807	3,294	50
2000	558	57,863	54,232	80,014	120,111	1,522	33
2001	516	99,219	133,956	345,385	168,265	2,406	50
2002	216	39,030	163,727	41,086	71,333	1,844	47.0
2003	254	88,595	147,674	290,508	238,734	2,763	59.0
Averages							
60-03	538	72,011	59,137	126,090	61,397	1,684	36.2
94-03	471	107,084	131,834	193,606	166,282	2,619	44.4
2004	1,508	85,929	80,083	132,627	72,317	1,845	55.0



**Appendix B. 4. Stock proportions and catches of sockeye salmon in the Alaskan District 106-41/42 (Sumner Strait) commercial drift gillnet fishery, 1985-2004.**

Data based on scale pattern analysis.

Year	Alaska	Canada	Stikine			Tahltan		
			Tahltan	Tuya Mainstem	Total	Wild	Planted	
Proportions								
1985	0.480	0.401	0.109		0.010	0.119		
1986	0.662	0.308	0.024		0.006	0.030		
1987	0.816	0.166	0.015		0.003	0.018		
1988	0.868	0.112	0.019		0.001	0.020		
1989	0.653	0.303	0.009		0.036	0.044		
1990	0.579	0.395	0.008		0.018	0.026		
1991	0.460	0.377	0.129		0.034	0.163		
1992	0.582	0.241	0.088		0.089	0.177		
1993	0.369	0.327	0.134		0.169	0.304		
1994	0.531	0.271	0.166		0.032	0.198	0.127	0.040
1995	0.287	0.565	0.099	0.001	0.048	0.149	0.049	0.051
1996	0.479	0.245	0.228	0.039	0.009	0.276	0.203	0.025
1997	0.538	0.269	0.079	0.101	0.014	0.193	0.056	0.023
1998	0.550	0.337	0.017	0.096	0.000	0.113	0.014	0.003
1999	0.618	0.101	0.074	0.079	0.128	0.281	0.070	0.004
2000	0.611	0.223	0.028	0.116	0.023	0.167	0.024	0.004
2001	0.493	0.336	0.032	0.112	0.028	0.171	0.017	0.015
2002	0.730	0.101	0.049	0.087	0.034	0.169	0.031	0.017
2003	0.700	0.095	0.097	0.068	0.040	0.204	0.050	0.047
Averages								
85-03	0.579	0.272	0.074	0.078	0.038	0.149		
94-03	0.554	0.254	0.087	0.078	0.036	0.192	0.064	0.023
2004	0.413	0.227	0.315	0.026	0.018	0.359	0.191	0.125
Catches								
1985	82,563	68,962	18,801		1,762	20,563		
1986	56,462	26,214	2,070		501	2,571		
1987	64,582	13,170	1,155		258	1,413		
1988	49,776	6,426	1,071		64	1,135		
1989	70,436	32,663	957		3,830	4,787		
1990	60,795	41,415	801		1,911	2,712		
1991	41,123	33,644	11,541		3,048	14,588		
1992	85,364	35,277	12,961		13,005	25,967		
1993	47,970	42,450	17,446		21,992	39,438		
1994	83,692	42,620	26,164		5,050	31,214	19,934	6,230
1995	38,343	75,505	13,292	125	6,448	19,865	6,514	6,778
1996	107,193	54,823	50,924	8,731	2,113	61,768	45,340	5,584
1997	63,827	31,892	9,327	11,937	1,692	22,956	6,594	2,733
1998	43,479	26,661	1,326	7,555	31	8,912	1,125	201
1999	45,335	7,420	5,425	5,786	9,412	20,623	5,159	266
2000	35,327	12,875	1,617	6,727	1,317	9,661	1,363	254
2001	48,906	33,309	3,164	11,063	2,777	17,004	1,723	1,441
2002	28,487	3,928	1,896	3,394	1,325	6,615	1,216	680
2003	62,037	8,446	8,595	6,016	3,501	18,112	4,434	4,161
Averages								
85-03	58,721	31,458	9,923	6,815	4,212	17,363		
94-03	55,663	29,748	12,173	6,815	3,367	21,673	9,340	2,833
2004	35,521	19,534	27,098	2,244	1,532	30,874	16,385	10,713

**Appendix B. 5. Salmon catch and effort in the Alaskan Subdistrict 106-30 (Clarence Strait) commercial drift gillnet fishery, 1960-2004.**

Year	Catch					Effort	
	Chinook	Sockeye	Coho	Pink	Chum	Permit Days	Days Open
1960	22	1,349	59	143	140	118	13
1961	341	11,126	13,083	97,801	54,822	1,378	57
1962	1,177	27,341	35,728	210,633	49,575	3,882	52
1963	1,250	35,462	36,376	379,093	39,723	3,278	51
1964	1,766	23,598	37,316	259,684	21,305	3,039	49
1965	1,123	29,013	45,158	463,577	11,895	2,849	51
1966	975	24,126	32,031	304,645	16,521	2,898	74
1967	650	26,237	7,097	39,325	6,744	1,048	27
1968	306	14,459	21,040	87,095	22,365	1,968	52
1969	270	24,060	4,186	104,998	4,510	1,026	31
1970	365	15,966	20,317	65,790	14,139	1,025	41
1971	665	19,211	23,358	244,236	18,351	1,517	50
1972	826	26,593	32,600	48,823	25,871	1,276	41
1973	391	16,741	13,526	143,324	25,243	1,303	26
1974	584	10,586	16,762	47,107	12,264	712	28
1975	2,120	12,732	26,312	173,675	16,206	1,159	9
1976	147	6,162	8,759	119,188	4,567	527	21
1977	469	19,615	6,582	368,069	9,060	940	21
1978		40,152	28,816	215,169	13,403	1,148	16
1979	2,262	31,566	15,996	471,817	18,691	1,848	25
1980	375	58,988	5,772	28,594	11,115	749	25
1981	967	49,708	9,453	217,379	8,614	1,321	26
1982	1,000	72,235	10,288	15,141	6,755	647	21
1983	299	20,689	21,234	133,943	7,143	589	37
1984	756	64,281	22,235	243,448	41,797	1,236	24
1985	1,149	92,899	40,611	265,574	24,107	1,372	36
1986	1,283	60,462	90,584	203,137	33,818	1,664	31
1987	395	57,262	16,758	126,423	16,148	799	20
1988	652	35,192	6,754	58,665	27,410	682	19
1989	963	84,848	36,714	683,150	27,195	1,583	34
1990	1,349	80,883	69,709	234,643	30,758	1,676	34
1991	1,211	54,749	61,170	69,232	39,195	1,505	39
1992	612	56,547	108,050	55,765	39,802	1,603	40
1993	534	76,096	96,136	240,974	37,606	1,646	38
1994	298	53,522	76,167	113,769	50,200	1,606	43
1995	288	73,585	60,948	294,159	110,709	1,422	34
1996	157	87,316	64,321	117,415	120,418	1,580	39
1997	246	49,843	24,633	374,432	85,844	1,329	38
1998	184	34,383	98,073	306,252	131,130	1,522	43
1999	121	31,500	73,179	213,522	163,560	1,766	49
2000	662	32,213	41,975	76,605	79,725	934	33
2001	541	64,794	54,509	479,945	114,645	1,573	50
2002	230	17,105	62,833	41,865	41,208	896	47
2003	168	28,309	64,383	180,189	61,519	1,158	59
Averages							
60-03	701	39,852	37,309	195,873	38,541	1,450	36.2
94-03	290	47,257	62,102	219,815	95,896	1,379	43.5
2004	1,227	30,330	58,548	112,610	38,257	953	55.0

**Appendix B. 6.** Stock proportions and catches of sockeye salmon in the Alaskan Subdistrict 106-30 (Clarence Strait) drift gillnet fishery, 1985-2004. Data based on scale pattern analysis.

Data based on scale pattern analysis.								
Year	Alaska	Canada	Stikine			Tahltan		
			Tahltan	Tuya Mainstem	Total	Wild	Planted	
Proportions								
1985	0.477	0.453	0.056		0.013	0.070		
1986	0.726	0.272	0.000		0.002	0.002		
1987	0.844	0.140	0.004		0.012	0.016		
1988	0.883	0.095	0.021		0.000	0.021		
1989	0.662	0.322	0.002		0.015	0.016		
1990	0.645	0.340	0.001		0.013	0.015		
1991	0.683	0.257	0.052		0.008	0.060		
1992	0.630	0.211	0.022		0.138	0.159		
1993	0.451	0.357	0.036		0.156	0.192		
1994	0.718	0.207	0.069		0.006	0.075	0.055	0.015
1995	0.370	0.551	0.047	0.000	0.032	0.079	0.036	0.010
1996	0.665	0.326	0.008	0.001	0.001	0.010	0.006	0.002
1997	0.668	0.276	0.009	0.026	0.021	0.056	-0.006	0.015
1998	0.710	0.237	0.010	0.043	0.000	0.053	0.010	0.000
1999	0.795	0.072	0.018	0.020	0.095	0.133	0.017	0.001
2000	0.702	0.252	0.007	0.027	0.012	0.046	0.007	0.000
2001	0.574	0.327	0.049	0.029	0.021	0.099	0.047	0.002
2002	0.824	0.091	0.009	0.039	0.037	0.085	0.009	0.000
2003	0.872	0.100	0.005	0.005	0.019	0.029	0.004	0.001
Average								
85-03	0.679	0.257	0.022	0.021	0.032	0.064		
94-03	0.690	0.244	0.023	0.021	0.024	0.067	0.018	0.005
2004	0.741	0.206	0.031	0.005	0.017	0.053	0.011	0.020
Catch								
1985	44,351	42,053	5,244		1,251	6,495		
1986	43,875	16,471	11		105	116		
1987	48,311	8,020	221		710	931		
1988	31,092	3,358	742		0	742		
1989	56,167	27,296	154		1,231	1,385		
1990	52,188	27,506	114		1,075	1,189		
1991	37,410	14,063	2,823		453	3,277		
1992	35,613	11,930	1,226		7,778	9,004		
1993	34,330	27,167	2,758		11,841	14,599		
1994	38,426	11,063	3,712		321	4,033	2,923	789
1995	27,201	40,570	3,423	0	2,391	5,814	2,668	755
1996	58,028	28,448	674	90	76	840	486	188
1997	33,274	13,773	437	1,295	1,064	2,796	-313	750
1998	24,411	8,150	352	1,465	5	1,822	352	0
1999	25,028	2,276	563	641	2,992	4,196	541	22
2000	22,608	8,121	210	885	389	1,484	210	0
2001	37,172	21,203	3,175	1,902	1,342	6,419	3,024	151
2002	14,086	1,559	159	664	637	1,460	159	0
2003	24,683	2,818	141	129	538	808	116	25
2004	22,485	6,253	929	138	526	1,593	336	593
Average								
85-03	36,224	16,623	1,376		1,800	3,548		
94-03	30,492	13,798	1,285	786	976	2,967	1,017	268
2004	22,485	6,253	929	138	526	1,593	336	593

**Appendix B. 7. Salmon catch and effort in the Alaskan District 108 commercial drift gillnet fishery, 1960-2004.**

the sum of the permits times days open

Year	Catch					Effort	
	Chinook	Sockeye	Coho	Pink	Chum	Permit Days	Days Open
1962	618	4,430	3,921	2,889	2,035		27
1963	1,430	9,979	11,612	10,198	11,024		53
1964	2,911	20,299	29,388	114,555	10,771		62
1965	3,106	21,419	8,301	4,729	2,480		48
1966	4,516	36,710	16,493	61,908	17,730		62
1967	6,372	29,226	6,747	4,713	5,955		40
1968	4,604	14,594	36,407	91,028	14,537		61
1969	5,021	19,209	5,790	11,877	2,311	967	46
1970	3,207	15,120	18,403	20,523	12,305	1,222	51
1971	3,717	18,143	14,876	21,806	4,665	1,070	57
1972	9,332	51,734	38,520	17,153	17,363	2,095	64
1973	9,254	21,387	5,837	6,585	6,680	1,519	39
1974	8,199	2,428	16,021	4,188	2,107	1,178	29
1975	1,534	0	0	0	1	288	8
1976	1,123	18	6,056	722	124	372	19
1977	1,443	48,374	14,405	16,253	4,233	742	23
1978	531	56	32,650	1,157	1,001	565	12
1979	91	21,58	234	13,478	1,064	94	5
1980	631	14,053	2,946	7,224	6,910	327	22
1981	283	8,833	1,403	1,466	3,594	177	9
1982	1,033	6,911	19,971	16,988	741	494	21
1983	47	178	15,369	4,171	675	263	17
1984	14	1,290	5,141	4,960	1,892	56	9
1985	20	1,060	1,926	5,325	1,892	70	14
1986	102	4,185	7,439	4,901	5,928	246	25
1987	149	1,629	1,015	3,343	949	81	13
1988	206	1,246	12	144	3,109	66	8
1989	310	10,083	4,261	27,640	3,375	216	28
1990	557	11,574	8,218	13,822	9,382	359	34
1991	1,504	22,275	15,864	10,935	11,402	643	49
1992	967	52,717	22,127	66,742	15,458	1,246	51
1993	1,628	76,874	14,307	39,661	22,504	1,569	48
1994	1,996	97,224	44,891	35,405	27,658	2,199	57
1995	1,702	76,756	17,834	37,788	54,296	1,729	50
1996	1,717	154,150	19,059	37,651	135,623	2,396	57
1997	2,566	93,039	2,140	65,745	38,913	1,699	44
1998	460	22,031	19,206	39,246	41,057	947	45
1999	1,049	36,548	28,437	48,550	117,196	1,675	54
2000	1,671	15,833	5,651	9,497	40,337	606	35
2001	7	610	10,731	11,012	5,397	377	36
2002	25	208	21,131	4,578	2,017	323	35
2003	312	42,158	38,795	76,113	51,701	1,270	56
Averages							
60-03	2,047	25,399	14,132	23,254	17,105	832	36.2
94-03	1,151	53,856	20,788	36,559	51,420	1,322	46.8
2004	7,410	103,392	26,439	20,439	37,996	1,830	53.0

**Alaska Hatchery Contributions of Large Chinook and Coho salmon**

	Large Chinook		Coho	
	Hatchery	Wild	Hatchery	Wild
1989	83	227	55	4,206
1990	249	308	2,536	5,682
1991	490	1,014	3,442	12,422
1992	439	528	7,067	15,060
1993	762	866	890	13,417
1994	594	1,402	2,043	42,848
1995	757	945	1,087	16,747
1996	839	878	1,269	17,790
1997	731	1,835	161	1,979
1998	302	158	3,042	16,164
1999	361	688	6,361	22,076
2000	934	737	2,801	2,850
2001	0	7	2,565	8,166
2002	0	25	1,449	19,682
2003	209	103	7,260	31,535
Averages				
94-03	450	648	2,802	15,375
2004	1,890	5,520	2,447	23,992



**Appendix B. 8. Stock proportions and catches of sockeye salmon in the Alaskan Subdistrict 108 commercial drift gillnet fishery, 2004.**

Data based on scale pattern analysis.

Year	Alaska	Canada	Stikine			Tahltan	
			Tahltan	Tuya Mainstem	Total	Wild	Planted
1985	0.064	0.000	0.292		0.644		
1986	0.206	0.017	0.094		0.683		
1987 <sup>a</sup>	0.125	0.000	0.438		0.437		
1988	0.213	0.039	0.178		0.571		
1989	0.117	0.054	0.034		0.795		
1990	0.395	0.128	0.111		0.366		
1991	0.173	0.118	0.395		0.314		
1992	0.163	0.051	0.258		0.528		
1993	0.231	0.114	0.256		0.399		
1994	0.326	0.208	0.362		0.103	0.246	0.116
1995	0.135	0.204	0.455	0.006	0.200	0.661	0.198
1996	0.102	0.082	0.622	0.069	0.125	0.816	0.552
1997	0.058	0.131	0.362	0.261	0.189	0.812	0.260
1998	0.115	0.108	0.189	0.244	0.343	0.777	0.182
1999	0.144	0.036	0.414	0.201	0.205	0.820	0.390
2000	0.204	0.128	0.132	0.261	0.275	0.669	0.100
2001	0.775	0.098	0.000	0.005	0.121	0.126	0.000
2002	0.875	0.120	0.000	0.000	0.005	0.005	0.000
2003	0.227	0.118	0.179	0.062	0.414	0.655	0.092
Averages							
85-03	0.245	0.092	0.251		0.354	0.663	
94-03	0.296	0.123	0.272	0.123	0.198	0.581	0.202
2004	0.100	0.030	0.613	0.018	0.239	0.869	0.361
Catch							
1985	68	0	310		683	992	
1986	862	71	393		2,858	3,252	
1987	204	0	714		712	1,425	
1988	265	48	222		711	933	
1989	1,180	545	341		8,017	8,358	
1990	4,576	1,479	1,280		4,239	5,519	
1991	3,859	2,622	8,807		6,987	15,794	
1992	8,604	2,696	13,599		27,818	41,417	
1993	17,758	8,742	19,688		30,686	50,374	
1994	31,715	20,250	35,222		10,037	45,259	23,936
1995	10,374	15,641	34,950	461	15,330	50,741	15,224
1996	15,755	12,618	95,837	10,621	19,319	125,777	85,041
1997	5,381	12,152	33,644	24,288	17,574	75,506	24,144
1998	2,541	2,376	4,170	5,383	7,561	17,114	4,000
1999	5,255	1,313	15,134	7,360	7,486	29,980	14,258
2000	3,226	2,019	2,097	4,138	4,353	10,588	1,591
2001	473	60	0	3	74	77	0
2002	182	25	0	0	1	1	0
2003	9,568	4,958	7,562	2,615	17,455	27,632	3,896
Averages							
85-03	6,413	4,611	14,419		9,574	26,881	
94-03	8,447	7,141	22,862	6,097	9,919	38,268	17,209
2004	10,375	3,136	63,347	1,869	24,666	89,882	37,274

<sup>a</sup>No data to separate Tahltan and Mainstem Stikine in 1987.

**Appendix B. 9. Salmon catches in the Alaskan Districts 106 and 108 test fisheries, 1984-2004.**

Table only includes years when test fisheries were operated.

Year	Catch					Boat Hours
	Chinook	Sockeye	Coho	Pink	Chum	
Sub-district 106-41 (Summer Strait)						
1984	13	1,370	101	975	793	5.94
1985	16	4,345	301	3,230	746	6.51
1986	23	982	177	60	248	4.14
1987	24	2,659	799	4,117	741	21.17
1988	11	1,020	89	137	772	5.04
1989	11	2,043	275	6,069	856	2.51
1990	13	2,256	432	372	552	0.29
1994	0	12	1	0	16	0.46
Sub-district 106-30 (Clarence Strait)						
1986	24	363	95	80	58	0.97
1987	1	899	589	1,705	467	16.00
1988	10	16	412	112	598	4.99
1989	4	37	464	431	329	
Total District 106						
1984	13	1,370	101	975	793	5.94
1985	16	4,345	301	3,230	746	6.51
1986	47	1,345	272	140	306	5.11
1987	25	3,558	1,388	5,822	1,208	37.17
1988	21	1,036	501	249	1,370	10.03
1989	15	2,080	739	6,500	1,185	2.51
1990	13	2,256	432	372	552	0.29
1994	0	12	1	0	16	0.46
District 108						
1984	37	641	11	822	813	
1985	33	1,258	11	465	381	2.99
1986	79	564	3	36	315	3.01
1987	30	290	13	1,957	488	3.20
1988	65	451	9	1,091	1,009	5.28
1989	15	1,038	45	2,459	283	2.64
1990	19	866	45	942	643	0.29
1991	21	893	18	390	455	6.46
1992	26	1,299	23	855	252	3.29
1993	30	303	0	18	31	1.88
1998	0	3,510	142	61	235	1.88
1999	29	4,801	217	429	1,368	1.88
2000	21	4,686	140	53	724	

**Appendix B. 10.** Stock proportions of sockeye salmon in the Alaskan District 106 and 108 test fisheries, 1984-2004.

Table only includes years when test fisheries were operated and catches included sockeye salmon.

Data based on scale pattern analysis. All Tahltan includes wild and hatchery fish.

Year	Alaska	Canada	Stikine			Tahltan		
			Tahltan	Tuya Mainstem	Total	Wild	Planted	
Sub-district 106-41 (Sumner Strait) Proportions								
1984	0.658	0.269	0.029		0.044	0.074		
1985	0.480	0.401	0.109		0.010	0.119		
1986	0.834	0.149	0.008		0.009	0.017		
1987	0.816	0.166	0.015		0.003	0.018		
1988	0.868	0.098	0.034		0.000	0.034		
1989	0.624	0.304	0.017		0.056	0.072		
1990	0.548	0.416	0.014		0.022	0.035		
1994	0.500	0.250	0.250		0.000	0.250	0.167	0.083
Sub-district 106-30 (Clarence Strait) Proportions								
1986	0.726	0.272	0.000		0.002	0.002		
1987	0.844	0.140	0.004		0.012	0.016		
1988	0.746	0.254	0.000		0.000	0.000		
1989	0.514	0.486	0.000		0.000	0.000		
District 106 Proportions								
1984	0.658	0.269	0.029		0.044	0.074		
1985	0.480	0.401	0.109		0.010	0.119		
1986	0.805	0.182	0.006		0.007	0.013		
1987	0.823	0.160	0.012		0.006	0.017		
1988	0.867	0.100	0.033		0.000	0.033		
1989	0.622	0.307	0.016		0.055	0.071		
1990	0.548	0.416	0.014		0.022	0.035		
1994	0.500	0.250	0.250		0.000	0.250	0.250	0.000
District 108 Proportions								
1985	0.064	0.000	0.292		0.644	0.936		
1986	0.134	0.044	0.486		0.336	0.822		
1987	0.125	0.000	0.438		0.437	0.875		
1988	0.205	0.049	0.132		0.614	0.746		
1989	0.132	0.084	0.072		0.712	0.784		
1990	0.417	0.172	0.094		0.318	0.411		
1991	0.128	0.128	0.494		0.251	0.745		
1992	0.149	0.076	0.333		0.442	0.774		
1993	0.168	0.109	0.475		0.248	0.719		
1998	0.064	0.041	0.353	0.438	0.104	0.895	0.336	0.016
1999	0.162	0.019	0.481	0.298	0.041	0.820	0.453	0.028
2000	0.110	0.116	0.302	0.321	0.150	0.774	0.240	0.062

**Appendix B. 11.** Stock specific catches of sockeye salmon in the Alaskan Districts 106 and 108 test fisheries, 1984-2004.

Table only includes years when test fisheries were operated and catches included sockeye salmon.

Data based on scale pattern analysis.

Year	Alaska	Canada	Stikine			Tahltan	
			Tahltan	Tuva Mainstem	Total	Wild	Planted
Sub-district 106-41 (Summer Strait) Catches							
1984	901	368	40	61	101		
1985	2,085	1,741	475	44	519		
1986	819	146	8	9	17		
1987	2,169	442	39	9	47		
1988	886	100	35	0	35		
1989	1,274	621	34	114	148		
1990	1,237	939	31	49	80		
1994	6	3	3	0	3		
Subdistrict 106-30 (Clarence Strait) Catches							
1986	263	99	0	1	1		
1987	758	126	3	11	15		
1988	12	4	0	0	0		
1989	19	18	0	0	0		
District 106 Catches							
1984	901	368	40	61	101		
1985	2,085	1,741	475	44	519		
1986	1,082	245	8	9	17		
1987	2,928	568	42	20	62		
1988	898	104	35	0	35		
1989	1,293	639	34	114	148		
1990	1,237	939	31	49	80		
1994	6	3	3	0	3	3	0
District 108 Catches							
1985	81	0	367	810	1,177		
1986	76	25	274	190	464		
1987	36	0	127	127	254		
1988	93	22	59	277	336		
1989	137	87	75	739	814		
1990	361	149	81	275	356		
1991	114	114	441	224	665		
1992	194	99	432	574	1,006		
1993	51	33	144	75	219		
1998	224	145	1,238	1,538	3,65	3,141	1,181
1999	776	89	2,309	1,430	197	3,936	2,174
2000	516	544	1,416	1,505	705	3,626	1,125



**Appendix B. 12. U.S. subsistence fishery harvest in the Stikine River, 2004**

Year	Harvest						Permits Fished
	Chinook		Sockeye	Coho	Pink	Chum	
	large	non large					
2004	12	9	243	0	22	11	16

**Appendix B. 13. Salmon catch and effort in the Canadian commercial fishery in the Stikine River, 1979-2004.**

Year	Catch						Effort	
	Chinook		Sockeye	Coho	Pink	Chum	Permit	
	Large	non large					Days	Days
1979 <sup>a</sup>	712	63	10,534	10,720	1,994	424	756.0	42.0
1980	1,488		18,119	6,629	736	771	668.0	41.0
1981	664		21,551	2,667	3,713	1,128	522.0	32.0
1982	1,693		15,397	15,904	1,782	722	1,063.0	71.0
1983	492	430	15,857	6,170	1,043	274	434.0	54.0
1984 <sup>b</sup>								
1985	256	91	17,093	2,172	2,321	532	145.5	22.5
1986	806	365	12,411	2,278	107	295	239.0	13.5
1987	909	242	6,138	5,728	646	432	287.0	20.0
1988	1,007	201	12,766	2,112	418	730	320.0	26.5
1989	1,537	157	17,179	6,092	825	674	325.0	23.0
1990	1,569	680	14,530	4,020	496	499	328.0	29.0
1991	641	318	17,563	2,638	394	208	282.4	39.0
1992	873	89	21,031	1,850	122	231	235.4	55.0
1993	830	164	38,464	2,616	29	395	483.8	58.0
1994	1,016	158	38,462	3,377	89	173	430.1	74.0
1995	1,067	599	45,622	3,418	48	256	534.0	59.0
1996	1,708	221	66,262	1,402	25	229	439.2	81.0
1997	3,283	186	56,995	401	269	222	569.4	89.0
1998	1,614	328	37,310	726	55	13	374.0	46.5
1999	2,127	789	32,556	181	11	8	261.3	31.0
2000	1,970	240	20,472	298	181	144	227.0	23.3
2001	826	59	19,872	233	78	56	173.0	23.0
2002	433	209	10,420	82	19	33	169.0	21.0
2003	695	672	51,735	190	850	112	275.2	28.8
Averages								
79-03 <sup>c</sup>	1,183	310	25,764	3,413	677	357	398	41.8
94-03	1,474	346	37,971	1,031	163	125	345	47.7
2004	2,481	2,070	77,530	271	8	134	431.0	43.0

<sup>a</sup> The lower river commercial catch in 1979 includes the upper river commercial catch.

<sup>b</sup> There was no commercial fishery in 1984.

<sup>c</sup> Chinook averages only since 1983 when large fish and jacks were recorded separately.

**Appendix B. 14.** Salmon stock proportions and catch by stock in the Canadian commercial fishery in the lower Stikine River.

Year	Proportions		Planted Tahltan	Catch		Tahltan		Stock ID Method	Fishery Timing	
	Tahltan	Tuya Mainstem		Tahltan	Tuya Mainstem	Wild	Planted			
1979	0.433	0.567		4,561	5,973			circuli counts		
1980	0.309	0.691		5,599	12,520			circuli counts		
1981	0.476	0.524		10,258	11,293			circuli counts		
1982	0.624	0.376		9,608	5,789			circuli counts		
1983	0.422	0.578		6,692	9,165			circuli counts		
1984								SPA		
1985	0.623	0.377		10,649	6,444			SPA		
1986	0.489	0.511		6,069	6,342			SPA&GPA		
1987	0.225	0.775		1,380	4,758			SPA&GPA		
1988	0.161	0.839		2,062	10,704			SPA&GPA		
1989	0.164	0.836		2,813	14,366			Eggs &TMR		
1990	0.346	0.654		5,029	9,501			Eggs &TMR		
1991	0.634	0.366		11,136	6,427			Eggs &TMR		
1992	0.482	0.518		10,134	10,897			Eggs &TMR		
1993	0.537	0.463		20,662	17,802			Eggs &TMR		
1994	0.616	0.384		23,678	14,784			Eggs &TMR		
1995	0.676	0.020	0.304	0.195	30,848	893	13,881	21,936	8,912 Eggs &TMR	commercial
1996	0.537	0.113	0.350	0.066	35,584	7,465	23,213	31,197	4,387 Eggs &TMR	commercial
1997	0.356	0.272	0.372	0.072	20,269	15,513	21,213	16,175	4,094 Eggs &TMR	commercial
1998	0.335	0.352	0.313	0.020	12,498	13,137	11,675	11,751	747 Eggs &TMR	commercial
1999	0.576	0.241	0.183	0.021	18,742	7,862	5,952	18,046	696 Eggs &TMR	commercial
2000	0.252	0.397	0.350	0.039	5,165	8,136	7,171	4,364	801 Eggs &TMR	commercial
2001	0.175	0.226	0.599	0.032	3,482	4,483	11,907	2,850	632 Eggs &TMR	test
2002	0.320	0.128	0.552	0.074	3,335	1,335	5,750	2,559	776 Eggs &TMR	test
2003	0.427	0.161	0.412	0.131	22,067	8,335	21,333	15,304	6,763 Eggs &TMR	test
Averages										
79-03	0.425	0.496			11,763	11,203				
94-03	0.427	0.212	0.382	0.072	17567	7462	13688	13798	3090	
2004	0.707	0.016	0.276	0.285	54,841	1,276	21,413	32,717	22,124 Eggs &TMR	commercial

**Appendix B. 15.** Salmon catch and effort in the Canadian commercial fishery in the upper Stikine River, 1975-2004.

Year	Catch					Effort	
	Chinook		Sockeye	Coho	Pink	Chum	Permit
	Large	non large					Days
1975	178		270	45	0	0	
1976	236		733	13	0	0	
1977	62		1,975	0	0	0	
1978	100		1,500	0	0	0	
1979 <sup>a</sup>							
1980	156		700	40	20	0	
1981	154		769	0	0	0	11.0
1982	76		195	0	0	0	8.0
1983	75		614	0	0	4	10.0
1984 <sup>b</sup>							
1985	62		1,084	0	0	0	14.0
1986	104	41	815	0	0	0	19.0
1987	109	19	498	0	0	19	20.0
1988	175	46	348	0	0	0	21.5
1989	54	17	493	0	0	0	14.0
1990	48	20	472	0	0	0	15.0
1991	117	32	761	0	0	0	13.0
1992	56	19	822	0	0	0	28.0
1993	44	2	1,692	0	0	0	48.0
1994	76	1	2,466	0	1	0	68.0
1995	9	17	2,355	0	0	0	54.0
1996	41	44	1,101	0	0	0	75.0
1997	45	6	2,199	0	0	0	42.0
1998	12	0	907	0	0	0	19.0
1999	24	12	625	0	0	0	19.0
2000	7	2	889	0	0	0	19.8
2001	0	0	487	0	0	0	6.0
2002	2	3	484	0	0	0	12.0
2003	19	12	454	0	0	0	10.0
Averages							
75-03 <sup>c</sup>	52	16	952	4	1	1	25
94-03	23.5	9.7	1,196.7	0.0	0.1	0.0	32.5
2004	0	1	626	0	0	0	11.0

<sup>a</sup> Catches in 1979 were included in the lower river commercial catches.

<sup>b</sup> There was no commercial fishery in 1984.

<sup>c</sup> Chinook averages only since 1986 when large fish and jacks were recorded separately.

**Appendix B. 16.** Salmon catch in the Canadian aboriginal fishery located at Telegraph Creek, Stikine River, 1972-2004.

Year	Catch					
	Chinook		Sockeye	Coho	Pink	Chum
	Large	non large				
1972			4,373	0	0	0
1973	200		3,670	0	0	0
1974	100		3,500	0	0	0
1975	1,024		1,982	5	0	0
1976	924		2,911	0	0	0
1977	100		4,335	0	0	0
1978	400		3,500	0	0	0
1979	850		3,000	0	0	0
1980	587		2,100	100	0	0
1981	586		4,697	200	144	0
1982	618		4,948	40	60	0
1983	851	215	4,649	3	77	26
1984	643	59	5,327	1	62	0
1985	793	94	7,287	3	35	4
1986	1,026	569	4,208	2	0	12
1987	1,183	183	2,979	3	0	8
1988	1,178	197	2,177	5	0	3
1989	1,078	115	2,360	6	0	0
1990	633	259	3,022	17	0	0
1991	753	310	4,439	10	0	0
1992	911	131	4,431	5	0	0
1993	929	142	7,041	0	0	0
1994	698	191	4,167	4	0	0
1995	570	244	5,490	0	0	7
1996	722	156	6,918	2	0	3
1997	1,155	94	6,365	0	0	0
1998	538	95	5,586	0	0	0
1999	765	463	4,874	0	0	0
2000	1,109	386	6,107	3	0	0
2001	665	44	5,241	0	0	0
2002	927	366	6,390	0	0	0
2003	682	373	6,595	0	0	0
Averages						
72-03 <sup>a</sup>	848	223	4,521	13	12	2
94-03	783	241	5,773	1	0	1
2004	1,425	497	6,862	4	0	0

<sup>a</sup> Chinook averages only since 1983 when large fish and jacks were recorded



**Appendix B. 17.** Stock specific sockeye catches in the Canadian upper river commercial and aboriginal fisheries on the Stikine River, 1972-2004.

Year	Upper River Commercial					Aboriginal Fishery				
	Tahltan	Tuya Mainstem	Tahltan			Tahltan	Tuya Mainstem	Tahltan		
			Wild	Planted				Wild	Planted	
1972						3,936		437		
1973						3,303		367		
1974						3,150		350		
1975	243	27				1,784		198		
1976	660	73				2,620		291		
1977	1,778	198				3,902		434		
1978	1,350	150				3,150		350		
1979 <sup>a</sup>						2,700		300		
1980	630	70				1,890		210		
1981	692	77				4,227		470		
1982	176	20				4,453		495		
1983	553	61				4,184		465		
1984 <sup>b</sup>						4,794		533		
1985	976	108				6,558		729		
1986	734	82				3,787		421		
1987	448	50				2,681		298		
1988	313	35				1,959		218		
1989	444	49				2,124		236		
1990	425	47				2,720		302		
1991	685	76				3,995		444		
1992	740	82				3,988		443		
1993	1,523	169				6,337		704		
1994	2,219	247	1,904	315		3,750		417	3,217	533
1995	2,120	60	176	1,508	612	4,941	139	410	3,514	1,427
1996	945	150	6	824	121	5,802	972	144	4,931	871
1997	1,152	834	213	914	238	3,318	2,403	644	2,631	687
1998	363	517	27	336	27	2,352	3,103	131	2,227	125
1999	359	206	60	356	3	3,038	1,423	413	2,903	135
2000	224	581	84	224	0	1,733	3,989	385	1,681	52
2001	213	229	45	148	65	1,795	2,939	507	1,454	341
2002	122	316	46	122	0	1,813	4,174	403	1,759	54
2003	316	100	38	219	97	3,987	1,571	1,037	2,659	1,328
Averages										
72-03	756	86				3,462		412		
94-03	803	333	94	655	148	3,253	2,301	449	2,698	555
2004	539	42	46	301	238	6,240	608	499	3,346	2,549

<sup>a</sup> Catches in 1979 were included in the lower river commercial catches.

<sup>b</sup> There was no commercial fishery in 1984.

**Appendix B. 18. Salmon catch in the combined Canadian net fisheries in the Stikine River, 1972-2004.**

There was no commercial fishery in 1984.

Chinook averages only since 1983 when large and small fish were recorded separately.

ESSR catches not included.

Year	Catch				
	Chinook		Sockeye	Coho	Pink
	Large	non large			Chum
1972	0		4,373	0	0
1973	200		3,670	0	0
1974	100		3,500	0	0
1975	1,202		2,252	50	0
1976	1,160		3,644	13	0
1977	162		6,310	0	0
1978	500		5,000	0	0
1979	1,562	63	13,534	10,720	1,994
1980	2,231		20,919	6,769	756
1981	1,404		27,017	2,867	3,857
1982	2,387		20,540	15,944	1,842
1983	1,418	645	21,120	6,173	1,120
1984 <sup>a</sup>	643	59	5,327	1	62
1985	1,111	185	25,464	2,175	2,356
1986	1,936	975	17,434	2,280	107
1987	2,201	444	9,615	5,731	646
1988	2,360	444	15,291	2,117	418
1989	2,669	289	20,032	6,098	825
1990	2,250	959	18,024	4,037	496
1991	1,511	660	22,763	2,648	394
1992	1,840	239	26,284	1,855	122
1993	1,803	308	47,197	2,616	29
1994	1,790	350	45,095	3,381	90
1995	1,646	860	53,467	3,418	48
1996	2,471	421	74,281	1,404	25
1997	4,483	286	65,559	401	269
1998	2,164	423	43,803	726	55
1999	2,916	1,264	38,055	181	11
2000	3,086	628	27,468	301	181
2001	1,491	103	25,600	233	78
2002	1,362	578	17,294	82	19
2003	1,396	1,057	58,784	190	850
Averages					
72-03 <sup>b</sup>	2,188	572	24,647	2,575	520
94-03	2,281	597	44,941	1,032	163
2004	3,906	2,568	85,018	275	8

**Appendix B. 19.** Sockeye salmon catches in the Stikine River harvested under Canadian Escapement Surplus to Spawning Requirement (ESSR) licenses, 1992-2004.

Year	Tahltan Area			Tuya Area				
	Catch			Tahltan	Tuya Mainstem	Tahltan		Total
	Total	Wild	Planted			Wild	Planted	
1993	1,752	1,714	38					0
1994	6,852	5,682	1,170					0
1995	10,740	6,680	4,060					0
1996	14,339	12,667	1,672		216			216
1997					2,015			2,015
1998					6,103			6,103
1999					2,822			2,822
2000					1,283			1,283
2001								0
2002								0
2003					7,031			7,031
2004					1,675			1,675

Salmon taken for otolith samples when ESSR not operated.

1997	378	302	76
1998	390	364	26
1999	429	404	25
2000	406	324	82
2001	50	30	20
2002	400	285	115
2003	400	225	175
2004	420	225	195

**Appendix B. 20. Salmon catches and effort in Canadian test fisheries in the Stikine River, 1985-2004.**

Year	Catches						Effort	
	Chinook		Sockeye	Coho	Pink	Chum	Drift=# Set=hr.	
	Large	released non large						
Drift Test Fishery Catches								
1985								
1986	27		12	412	226	8	25	405
1987 <sup>a</sup>	128			385	162	111	61	845
1988	168		14	325	75	9	33	720
1989	116		4	364	242	41	46	870
1990	167		6	447	134	5	29	673
1991	90		1	503	118	37	30	509
1992	135		27	393	75	13	23	312
1993	94		11	440	37	6	18	304
1994	43		4	179	71	6	20	175
1995	18		13	297	35	4	12	285
1996	42		5	262	55	4	55	245
1997	30		7	245	11	9	15	210
1998	25		11	190	207	20	40	820
1999	53		43	410	312	11	17	1,006
2000	59		4	374	60	9	45	694
2001	128		3	967	257	74	47	883
2002	63		50	744	306	14	31	898
2003	64		62	997	291	92	54	660
Averages								
86-03	81		16	441	149	26	33	584
94-03	53		20	467	161	24	34	588
2004	29		41	420	352	15	80	778
Set Test Fishery Catches								
1985				1,340				
1986								
1987 <sup>a</sup>	61			1,283	620	587	193	1,456
1988	101		15	922	130	23	65	1,380
1989	101		20	1,243	502	249	103	1,392
1990	64		12	1,493	271	42	48	1,212
1991	77		15	1,872	127	197	48	1,668
1992	62		21	1,971	193	56	43	1,249
1993	85		11	1,384	136	6	63	1,224
1994	74		34	414	0	0	0	456
1995	61		35	850	166	5	41	888
1996	64		40	338	0	0	0	312
1997								
1998								
1999	49		16	803	64	6	10	1,577
2000	87		0	1,015	181	25	120	3,715
2001	56		7	2,223	1,078	124	61	2,688
2002	48		56	3,540	1,323	13	48	2,845
2003	14		91	2,173	525	200	85	1,116
Averages								
87-03	67		27	1,429	354	102	62	1,545
94-03	57		35	1,420	417	47	46	1,700
2004	22		39	918	135	41	103	524



Appendix B.20 (continued). Page 2 of 2.

Year	Catches						Effort Drift=# Set=hr.
	Chinook		Jacks	Sockeye	Coho	Pink	Chum
	Large	non large					
Additional Test Fishery Catches							
1992	417		134	594	0	0	85
1993	389		65	1,925	2	1	266
1994	178		40	840	0	0	131
1995	169		136	1,423	26	1	222
1996	192		31	712	0	0	138
1997							
1998							
1999	751		38	4,683	16	18	531
2000	787		14	989	195	0	1,427
2001	1,652		49	91	426	0	1,399
2002	1,545		217	128	1,116	0	2,048
2003	1,225		617	186	883	5	1,915
Averages							
94-03	812		143	1,132	333	3	976
2004	0		0	0	0	0	0
Total Test Fishery Catches							
1985	0		0	1,340	0	0	0
1986	27		12	412	226	8	25
1987	189		30	1,668	782	698	254
1988	269		29	1,247	205	32	98
1989	217		24	1,607	744	290	149
1990	231		18	1,940	405	47	77
1991	167		16	2,375	245	234	78
1992	614		182	2,958	268	69	66
1993	568		87	3,749	175	13	84
1994	295		78	1,433	71	6	20
1995	248		184	2,570	227	10	62
1996	298		76	1,312	55	4	55
1997	30		7	245	11	9	15
1998	25		11	190	207	20	40
1999	853		97	5,896	392	35	29
2000	933	226	18	2,378	436	34	174
2001	1,836	401	59	3,281	1,761	198	109
2002	1,656	378	323	4,412	2,745	27	80
2003	1,303		770	3,356	1,699	297	168
Averages							
85-03	514		106	2,230	561	107	83
94-03	748		162	2,507	760	64	75
2004	51		80	1,338	487	56	183

<sup>a</sup> 1987 jack chinook catch was for both set and drift nets.

**Appendix B. 21.** Sockeye salmon stock proportions and catch by stock in the test fishery in the lower Stikine River, 1985-2004.

Average proportions were from averages of weekly estimates.

Year	Catch					Proportions			
	Tahltan		Tuya Mainstem	Marked Tahltan		Tahltan		Average	Tuya Mainstem
	U.S.	Canada				U.S.	Canada		
1985	560	439		841		0.418	0.328	0.372	0.628
1986	164	127		267		0.398	0.308	0.352	0.648
1987	513	397		1,213		0.308	0.238	0.273	0.727
1988	408	295		895		0.327	0.237	0.282	0.718
1989		414		1,192			0.258	0.258	0.742
1990		822		1,058			0.454	0.454	0.546
1991		1,443		931			0.608	0.608	0.392
1992		1,912		1,046			0.646	0.646	0.354
1993		2,184		1,564			0.583	0.583	0.417
1994		1,228		205			0.857	0.857	0.143
1995		2,064	20	486	729		0.803	0.803	0.008
1996		875	116	321	108		0.667	0.667	0.088
1997		97	54	94	20		0.396	0.396	0.220
1998		70	51	69	4		0.368	0.368	0.268
1999		3,031	1,564	1,301	113		0.514	0.514	0.265
2000		605	982	791	94		0.254	0.254	0.413
2001		684	924	1,673	124		0.208	0.208	0.282
2002		1,726	694	1,992	402		0.391	0.391	0.157
2003		1,505	428	1,423	374		0.448	0.448	0.128
Averages									
85-03								0.460	0.203
94-03								0.460	0.203
2004		686	44	608	277		0.510	0.510	0.033

**Appendix B. 22.** Estimated proportion of inriver run comprised of Tahltan, Tuya, and mainstem sockeye stocks, 1979-2004.

Average proportions were from averages of weekly stock composition and migratory timing (from drift test fishery) estimates.						
Year	Tahltan		Average			fishery timing
	U.S.	Canada	Tahltan	Tuya	Mainstem	
1979	0.433		0.433		0.567 circuli counts	
1980	0.305		0.305		0.695 circuli counts	
1981	0.475		0.475		0.525 circuli counts	
1982	0.618		0.618		0.382 circuli counts	
1983	0.489	0.423	0.456		0.544 circuli counts	
1984	0.635	0.394	0.493		0.507 scale pattern analysis	
1985	0.621	0.363	0.466		0.534 scale pattern analysis	
1986	0.398	0.500	0.449		0.551 scale pattern analysis & GPA	
1987	0.338	0.257	0.304		0.696 scale pattern analysis & GPA	
1988	0.209	0.122	0.172		0.828 scale pattern analysis & GPA	
1989		0.188	0.188		0.812 Eggs & TMR	
1990		0.417	0.417		0.583 Eggs & TMR	
1991		0.561	0.561		0.439 Eggs & TMR	
1992		0.496	0.496		0.504 Eggs & TMR	
1993		0.477	0.477		0.523 Eggs & TMR	
1994		0.606	0.606		0.394 Eggs & TMR	commercial
1995		0.578	0.578	0.016	0.406 Eggs & TMR	commercial
1996		0.519	0.519	0.104	0.377 Eggs & TMR	commercial
1997		0.297	0.297	0.229	0.474 Eggs & TMR	commercial
1998		0.309	0.309	0.348	0.344 Eggs & TMR	commercial
1999		0.545	0.545	0.245	0.209 Eggs & TMR	commercial
2000		0.260	0.260	0.391	0.349 Eggs & TMR	commercial
2001		0.202	0.202	0.268	0.530 Eggs & TMR	test
2002		0.360	0.360	0.141	0.498 Eggs & TMR	test
2003		0.421	0.421	0.158	0.421 Eggs & TMR	test
Averages						
79-03			0.416		0.508	
94-03			0.410	0.211	0.400	
2004		0.674	0.669	0.021	0.311 Eggs & TMR	commercial

# Appendix B. 23. Counts of adult sockeye salmon migrating through Tahltan Lake weir, 1959-2004.

Daily counts were unavailable in 1963. A rock slide blocked the entrance during some of the migration in 1965.

Year	Weir Installed	Date of Arrival			Weir Pulled	Total Count	Brood-stock	Samples or ESSR	Otolith Samples	Spawners		
		First	50%	90%						Total	Natural	Hatchery
1959	30-Jun	2-Aug	12-Aug	16-Aug		4,311						
1960	15-Jul	2-Aug	24-Aug	27-Aug		6,387						
1961	20-Jul	9-Aug	11-Aug	15-Aug		16,619						
1962	1-Aug	2-Aug	5-Aug	8-Aug		14,508						
1963	3-Aug					1,780						
1964	23-Jul	26-Jul	14-Aug	25-Aug		18,353						
1965	19-Jul	18-Jul	2-Sep	7-Sep		1,471						
1966	12-Jul	3-Aug	13-Aug	21-Aug		21,580						
1967	11-Jul	14-Jul	21-Jul	28-Jul		38,801						
1968	11-Jul	21-Jul	25-Jul	8-Aug		19,726						
1969	7-Jul	11-Jul	18-Jul	31-Jul		11,805						
1970	5-Jul	25-Jul	1-Aug	11-Aug		8,419						
1971	12-Jul	19-Jul	28-Jul	12-Aug		18,523						
1972	13-Jul	13-Jul	19-Jul	31-Aug	21-Aug	52,545						
1973	10-Jul	24-Jul	30-Jul	7-Aug	1-Sep	2,877						
1974	3-Jul	28-Jul	3-Aug	17-Aug	13-Sep	8,101						
1975	10-Jul	25-Jul	8-Aug	17-Aug	28-Aug	8,159						
1976	16-Jul	29-Jul	1-Aug	6-Aug	24-Aug	24,111						
1977	6-Jul	11-Jul	16-Jul	10-Aug	25-Aug	42,960						
1978	10-Jul	10-Jul	20-Jul	29-Jul	26-Aug	22,788						
1979	9-Jul	23-Jul	1-Aug	11-Aug	31-Aug	10,211						
1980	4-Jul	15-Jul	22-Jul	12-Aug	3-Sep	11,018						
1981	30-Jun	16-Jul	26-Jul	3-Aug	8-Sep	50,790						
1982	2-Jul	10-Jul	19-Jul	29-Jul	4-Sep	28,257						
1983	27-Jun	5-Jul	22-Jul	5-Aug	7-Sep	21,256						
1984	20-Jun	19-Jul	24-Jul	3-Aug	29-Aug	32,777						
1985	28-Jun	18-Jul	31-Jul	6-Aug	5-Sep	67,326						
1986	10-Jul	26-Jul	4-Aug	11-Aug	4-Sep	20,280						
1987	14-Jul	21-Jul	4-Aug	13-Aug	27-Aug	6,958						
1988	16-Jul	16-Jul	6-Aug	14-Aug	29-Aug	2,536						
1989	7-Jul	9-Jul	1-Aug	14-Aug	4-Sep	8,316	2,210			6,106		
1990	6-Jul	15-Jul	26-Jul	3-Aug	28-Aug	14,927	3,302			11,625		
1991	30-Jun	17-Jul	25-Jul	7-Aug	5-Sep	50,135	3,552			46,583		
1992	9-Jul	18-Jul	25-Jul	3-Aug	2-Sep	59,907	3,694			56,213		
1993	7-Jul	10-Jul	28-Jul	10-Aug	11-Sep	53,362	4,506	1,752		47,104	46,074	1,030
1994	7-Jul	14-Jul	30-Jul	9-Aug	7-Sep	46,363	3,378	6,852		36,133	29,961	6,172
1995	8-Jul	9-Jul	24-Jul	12-Aug	16-Sep	42,317	4,902	10,740		26,675	16,591	10,084
1996	6-Jul	14-Jul	22-Jul	4-Aug	10-Sep	52,500	4,402	14,339		33,759	29,823	3,936
1997	9-Jul	15-Jul	25-Jul	26-Aug	26-Sep	12,483	2,294		378	9,811	7,829	1,982
1998	9-Jul	11-Jul	25-Jul	26-Aug	17-Sep	12,658	3,099		390	9,169	8,553	616
1999	10-Jul	19-Jul	31-Jul	13-Aug	15-Sep	10,748	2,870		429	7,449	6,952	497
2000	9-Jul	21-Jul	25-Jul	3-Aug	4-Sep	6,076	1,717		406	3,953	3,152	801
2001	8-Jul	19-Jul	31-Jul	9-Aug	14-Sep	14,811	2,386		50	12,375	7,475	4,900
2002	7-Jul	12-Jul	25-Jul	8-Aug	14-Sep	17,740	3,051		400	14,289	10,490	3,799
2003	7-Jul	11-Jul	29-Jul	8-Aug	18-Sep	53,933	3,946		400	49,587	27,893	21,694
Averages												
59-03	09-Jul	18-Jul	30-Jul	11-Aug	05-Sep	23,367						
94-03	08-Jul	14-Jul	26-Jul	11-Aug	14-Sep	26,963			321	20,320	14,872	5,448
2004	07-Jul	12-Jul	25-Jul	10-Aug	15-Sep	63,372	420		158	58,709	28,715	29,994



**Appendix B. 24.** Aerial survey counts of Mainstem sockeye stocks in the Stikine River drainage, 1984-2004.

The index represents the combined counts from eight spawning areas.

Survey conditions were exceptionally poor; therefore, the counts probably did reflect relative abundance.

Year	Chutine River	Scud River	Porcupine Slough	Christina Creek	Craig River	Bronson Slough	Verrett Creek	Verrett Slough	Escapement Index
1984	526	769	69	130	102		640		2,236
1985	253	282	69	67	27		383		1,081
1986	139	151	6	0	0		270		566
1987	6	490	62	6	30		103		697
1988	14	219	22	7	0		114		376
1989	29	269	133	10	60	60	180	68	809
1990	24	301	31	4	0	0	301	82	743
1991	0	100	61		7	32	179	8	387
1992	164	1,242	90	50	17	138	163	22	1,886
1993	57	321	141	28	2	79	107	142	877
1994	267	292	66			62	147	114	948
1995	13	260	11			72	47	31	434
1996	134	351	149			27	54	338	1,053
1997	204	271	25			12	116	32	660
1998	230	246	89			9	183	135	892
1999	56	301	64			54	98	78	651
2000	47	86	86			32	0	90	341
2001	601	2,037	268			163	217	232	3,518
2002	239	216	95			13	353	0	916
2003	240	71	239			0	54	0	604
Averages									
84-03	162	414	89			50	185	91	984
94-03	203	413	109			44	127	105	1,002
2004	245	262	56			0	85	0	648

**Appendix B. 25. Estimates of sockeye salmon smolts migrating through Tahltan Lake smolt weir, 1984-2004.**

Estimate changes due to overcrowding mortality, 1987 and expansions by average % of outmigration by date from historical data90-92.									
	Weir	Date of Arrival			Total	Total	Date and	Smolt	
Year	Installed	First	50%	90%	Count	Estimate	Expansion	Natural	Hatchery
1984	10-May	11-May	23-May	6-Jun		218,702			
1985	25-Apr	23-May	31-May	28-May		613,531			
1986	8-May	10-May	31-May	7-Jun		244,330			
1987	7-May	15-May	23-May	24-May		810,432			
1988	1-May	8-May	20-May	6-Jun		1,170,136			
1989	5-May	8-May	22-May	6-Jun		580,574			
1990	5-May	15-May	29-May	5-Jun	595,147	610,407	6/14 97.5%		
1991	5-May	14-May	21-May	30-May	1,439,676	1,487,265	6/13 96.8%	1,220,397	266,868
1992	7-May	13-May	21-May	27-May	1,516,150	1,555,026	6/14 97.5%	750,702	804,324
1993	7-May	11-May	17-May	22-May		3,255,045		2,855,562	399,483
1994	8-May	8-May	16-May	12-Jun		915,119		620,809	294,310
1995	5-May	6-May	13-May	11-Jun		822,284		767,027	55,257
1996	11-May	11-May	20-May	25-May		1,559,236		1,408,020	151,216
1997	7-May	11-May	23-May	30-May		518,202		348,685	169,517
1998	7-May	8-May	25-May	5-Jun		540,866		326,420	214,446
1999	6-May	10-May	9-Jun	15-Jun		762,033		468,488	293,545
2000	7-May	9-May	22-May	17-Jun		619,274		355,618	263,656
2001	6-May	7-May	24-May	18-Jun		1,495,642		841,268	654,374
2002	6-May	14-May	27-May	12-Jun		1,873,598		1,042,435	831,163
2003	6-May	11-May	29-May	6-Jun		1,960,480		979,442	981,038
Averages									
84-03	05-May	11-May	23-May	04-Jun		1,080,609		921,913	413,784
94-03	06-May	09-May	23-May	08-Jun		1,106,673		715,821	390,852
2004	06-May	10-May	21-May	25-May		2,116,701		825,513	1,291,188

**Appendix B. 26. Weir counts of Chinook salmon at Little Tahltan River, 1985-2004.**

	Weir	Date of Arrival			Total Broodstock	Natural	Total
Year	Installed	First	50%	90%	Count	and Other Spawners	Natural Spawners
Large Chinook							
1985	3-Jul	4-Jul	30-Jul	6-Aug	3,114		3,114
1986	28-Jun	29-Jun	21-Jul	5-Aug	2,891		2,891
1987	28-Jun	4-Jul	24-Jul	2-Aug	4,783		4,783
1988	26-Jun	27-Jun	18-Jul	3-Aug	7,292		7,292
1989	25-Jun	26-Jun	23-Jul	2-Aug	4,715		4,715
1990	22-Jun	29-Jun	23-Jul	4-Aug	4,392		4,392
1991	23-Jun	25-Jun	20-Jul	3-Aug	4,506		4,506
1992	24-Jun	4-Jul	21-Jul	30-Jul	6,627	-12	6,615
1993	20-Jun	21-Jun	16-Jul	28-Jul	11,449	-12	11,437
1994	18-Jun	28-Jun	22-Jul	2-Aug	6,387	-14	6,373
1995	17-Jun	20-Jun	17-Jul	4-Aug	3,072	0	3,072
1996	17-Jun	26-Jun	16-Jul	30-Jul	4,821	0	4,821
1997	14-Jun	22-Jun	16-Jul	29-Jul	5,557	-10	5,547
1998	13-Jun	19-Jun	14-Jul	29-Jul	4,879	-6	4,873
1999	18-Jun	27-Jun	19-Jul	1-Aug	4,738	-5	4,733
2000	19-Jun	23-Jun	21-Jul	5-Aug	6,640	-9	6,631
2001	20-Jun	23-Jun	18-Jul	2-Aug	9,738	-8	9,730
2002	20-Jun	23-Jun	18-Jul	27-Jul	7,490	-14	7,476
2003	20-Jun	20-Jun	19-Jul	6-Aug	6,492	0	6,492
Averages							
85-03	21-Jun	26-Jun	12-Nov	01-Aug	5,768		5,763
94-03	18-Jun	24-Jun	24-Aug	01-Aug	5,981	-7	5,975
2004	18-Jun	19-Jun	20-Jul	31-Jul	16,381	0	16,381
Jack Chinook (fish <660 mid-eye fork length or <735 snout fork length)							
1985	3-Jul	4-Jul	31-Jul	10-Aug	316		3,430
1986	28-Jun	3-Jul	25-Jul	6-Aug	572		3,463
1987	28-Jun	3-Jul	26-Jul	6-Aug	365		5,148
1988	26-Jun	27-Jun	17-Jul	2-Aug	327		7,619
1989	25-Jun	26-Jun	23-Jul	2-Aug	199		4,914
1990	22-Jun	5-Jul	22-Jul	30-Jul	417		4,809
1991	23-Jun	3-Jul	24-Jul	7-Aug	313		4,819
1992	24-Jun	12-Jul	22-Jul	30-Jul	131		6,758
1993	20-Jun	30-Jun	14-Jul	1-Aug	60		11,509
1994	18-Jun	2-Jul	22-Jul	5-Aug	121		6,508
1995	17-Jun	22-Jun	28-Jul	10-Aug	135		3,207
1996	17-Jun	12-Jul	25-Jul	5-Aug	22		4,843
1997	14-Jun	26-Jun	21-Jul	1-Aug	54		5,611
1998	13-Jun	26-Jun	20-Jul	7-Aug	37		4,916
1999	18-Jun	1-Jul	23-Jul	6-Aug	202		4,940
2000	19-Jun	23-Jun	20-Jul	5-Aug	108		6,748
2001	20-Jun	23-Jun	27-Jul	3-Aug	269		10,007
2002	20-Jun	26-Jun	21-Jul	7-Aug	618		8,108
2003	20-Jun	30-Jun	21-Jul	5-Aug	334		6,826
Averages							
85-03	21-Jun	29-Jun	22-Jul	03-Aug	242		6,005
94-03	18-Jun	27-Jun	21-Jul	03-Aug	190		6,165
2004	18-Jun	21-Jun	19-Jul	31-Jul	250		16,631

# Appendix B. 27. Index counts of Stikine Chinook escapements, 1979-2004.

Survivor run and escapement generated from mark-recapture studies, survivor and marine caught as reported in ADF&G fisheries data series reports

Total run from jointly accepted US and Canadian catch estimates. Counts do not include small Chinook. Terminal run includes only catches in the Stikine River and

Year	Survivor		Marine	Total	% to	Little Tahltan		Tahltan	Beatty	Andrew Creek	
	Run	Catches				Weir	Aerial			Counts	Comments
1979							1,166		2,118		327 Weir inc. broodstock
1980							2,137		960	122	282 Weir inc. broodstock
1981							3,334		1,852	558	536 Weir inc. broodstock
1982							2,830		1,690	567	672 Weir inc. broodstock
1983							594		453	83	366 Weir inc. broodstock
1984							1,294			126	389 Weir inc. broodstock
1985						3,114	1,598	1,490		147	320 Foot
1986						2,891	1,201	1,400		183	708 Foot
1987						4,783	2,706	1,390		312	788 Heli
1988						7,292	3,796	4,384		593	564 Foot
1989						4,715	2,527			362	530 Aerial
1990						4,392	1,755	2,134		271	664 Foot
1991						4,506	1,768	2,445		193	400 Aerial
1992						6,627	3,607	1,891		362	778 Heli
1993						11,437	4,010	2,249		757	1,060 Foot
1994						6,373	2,422			184	572 Heli
1995						3,072	1,117	696		152	343 Foot
1996	31,718	2,769	28,949		0.167	4,821	1,920	772		218	335 Heli
1997	31,509	4,513	26,996		0.205	5,547	1,907	260		218	293 Foot
1998	28,133	2,165	25,968		0.188	4,873	1,385	587		125	487 Foot
1999	23,716	3,769	19,947		0.237	4,733	1,379				605 Aerial
2000	30,301	2,770	27,531		0.241	6,631	2,720				690 Aerial
2001	66,646	4,103	62,543		0.156	9,730	4,258				1,054 Aerial
2002	53,983	3,808	50,175	3,587	57,570	7,476	Missed peak survey time				876 Aerial
2003	43,022	3,057	39,965	3,895	46,917	6,492	1,903				595 Foot
Averages											
7943						5,763	2,222	1,575	291		569
9443						5,975	2,112				585
2004	52,538	3,638	48,900	9,599	62,137	16,381	6,014				1,844 Foot



**Appendix B. 28. Index counts of Stikine coho salmon escapements, 1979-2004.**

Missing data due to poor survey conditions and Craig count low in 2004 due to survey conditions.

Year	Date	Katete		Craig	Verrett	Bronson	Scud	Porcupine	Christina	Total
		West	Katete			Slough	Slough			
1984	30-Oct	147	313	0	15	42				517
1985	25-Oct	590	1,217	735	39	0	924	365		3,870
1988	28-Oct	32	227		175		97	53	0	584
1989	29-Oct	336	896	992	848	120	707	90	55	4,044
1990	30-Oct	94	548	810	494		664	430		3,040
1991	29-Oct	302	878	985	218		221	352		2,956
1992	29-Oct	295	1,346	949	320		462	316		3,688
1993	30-Oct						206	324		
1994	1-Nov	28	652	1,026	466		448	1,105		3,725
1995	30-Oct	211	208	1,419	574		621	719		3,752
1996	30-Oct	163	232	205	549		630	1,466		3,245
1997	1-Nov	2	0	19	116		272	648		1,057
1998	30-Oct	14	63	141	282		143	450		1,093
1999	5-Nov	163	773	891	490		661	894		3,872
2000	2-Nov				5		95	206		306
2001	2-Nov	207	1,401	3,121	708		1,571	397		7,405
2002	5-Nov	806	2,642	4,488	1,695		1,389	1,626		12,646
2003	no surveys conducted due to inclement survey conditions									
Average										
84-03		226	760	1,127	437		569	590		3,488
94-03		199	746	1,414	543		648	835		4,122
2004		78	762	19	959		173	1,009		3,000

# Appendix B. 29. Stikine River sockeye salmon run size, 1979-2004.

The averages for 1983-1985 are averages of weekly run timing estimates as well as stock composition estimates and are not simple averages. Escapement includes fish later captured for broodstock and biological samples. Catches include test fishery catches.

Year	Inriver Run			Inriver		Marine	Total Run
	Canada	U.S.	Average	Catch	Escapement	Catch	
1979		40,353	40,353	13,534	26,819	8,299	48,652
1980		62,743	62,743	20,919	41,824	23,206	85,949
1981		138,879	138,879	27,017	111,862	27,538	166,417
1982		68,761	68,761	20,540	48,221	42,408	111,169
1983	77,260	66,838	71,683	21,120	50,563	5,772	77,455
1984	95,454	59,168	76,211	5,327	70,884	7,736	83,947
1985	237,261	138,498	184,747	26,804	157,943	29,747	214,494
1986			69,036	17,846	51,190	6,420	75,456
1987			39,264	11,283	27,981	4,085	43,350
1988			41,915	16,538	25,377	3,181	45,096
1989			75,054	21,639	53,415	15,492	90,546
1990			57,386	19,964	37,422	9,856	67,242
1991			120,152	25,138	95,014	34,323	154,476
1992			154,542	29,242	125,300	77,394	231,936
1993			176,100	52,698	123,402	104,630	280,730
1994			127,527	53,380	74,147	80,509	208,036
1995			142,308	66,777	75,531	76,420	218,728
1996			184,400	90,148	94,252	188,385	372,785
1997			125,657	67,819	57,838	101,258	226,915
1998			90,459	50,096	40,363	30,989	121,448
1999			65,879	46,773	19,106	58,735	124,614
2000			53,145	31,129	22,016	25,359	78,504
2001			103,755	28,881	74,874	23,500	127,255
2002			68,635	21,706	46,929	8,076	76,711
2003			194,425	69,171	125,254	46,552	240,977
Averages							
79-03			101,321	34,354	66,967	41,587	142,908
94-03			115,619	52,924	62,695	63,978	179,597
2004			188,626	88,451	100,176	122,349	310,975
Tahltan sockeye run size							
1979			17,472	7,261	10,211	5,076	22,548
1980			19,137	8,119	11,018	11,239	30,376
1981			65,968	15,178	50,790	16,189	82,157
1982			42,493	14,236	28,257	20,918	63,412
1983			32,684	11,428	21,256	5,073	37,758
1984			37,571	4,794	32,777	3,102	40,673
1985			86,008	18,682	67,326	25,197	111,205
1986			31,015	10,735	20,280	2,757	33,771
1987			11,923	4,965	6,958	2,259	14,182
1988			7,222	4,686	2,536	2,129	9,351
1989			14,110	5,794	8,316	1,561	15,671
1990			23,923	8,996	14,927	2,307	26,230
1991			67,394	17,259	50,135	23,612	91,006
1992			76,681	16,774	59,907	28,218	104,899
1993			84,068	32,458	51,610	40,036	124,104
1994			77,239	37,728	39,511	65,101	142,340
1995			82,290	50,713	31,577	51,665	133,955
1996			95,706	57,545	38,161	147,435	243,141
1997			37,319	24,836	12,483	43,408	80,727
1998			27,941	15,283	12,658	7,086	35,027
1999			35,918	25,170	10,748	23,431	59,349
2000			13,803	7,727	6,076	5,340	19,143
2001			20,985	6,174	14,811	6,339	27,324
2002			24,736	6,996	17,740	2,055	26,791
2003			81,808	27,875	53,933	16,298	98,106
Averages							
79-03			44,617	17,755	26,862	22,296	66,913
94-03			49,774	26,250	23,525	36,816	86,590
2004			125,677	62,725	62,952	91,374	217,051

Appendix B.29. (continued). Page 2 of 2.

Year	Inriver Run			Inriver Catch	Escapement	Marine Catch	Total Run
	Canada	U.S.	Average				
Tuya sockeye run size							
1995			2,216	1,112	1,104	586	2,802
1996			19,158	8,919	10,239	19,442	38,600
1997			28,738	20,819	7,919	37,520	66,258
1998			31,442	22,911	8,531	15,941	47,383
1999			16,165	13,877	2,288	15,217	31,381
2000			20,779	14,971	5,808	13,255	34,034
2001			27,783	8,575	19,208	12,968	40,751
2002			9,707	6,519	3,188	4,058	13,765
2003			30,814	17,465	13,349	8,760	39,574
Averages							
95-03			20,756	12,898	7,858	14,194	34,950
2004			3,946	3,645	301	4,251	8,197
Mainstem sockeye run size							
1979			22,880	6,273	16,608	3,223	26,103
1980			43,606	12,800	30,806	11,967	55,573
1981			72,911	11,839	61,072	11,349	84,260
1982			26,267	6,304	19,964	21,490	47,757
1983			38,999	9,692	29,307	699	39,698
1984			38,640	533	38,107	4,634	43,274
1985			98,739	8,122	90,617	4,550	103,289
1986			38,022	7,111	30,910	3,663	41,685
1987			27,342	6,318	21,023	1,826	29,168
1988			34,693	11,852	22,841	1,052	35,745
1989			60,944	15,845	45,099	13,931	74,875
1990			33,464	10,968	22,495	7,549	41,013
1991			52,758	7,879	44,879	10,712	63,470
1992			77,861	12,468	65,393	49,176	127,037
1993			92,033	20,240	71,792	64,594	156,627
1994			50,288	15,652	34,636	15,408	65,696
1995			57,802	14,953	42,850	24,169	81,971
1996			69,536	23,684	45,852	21,508	91,044
1997			59,600	22,164	37,436	20,330	79,930
1998			31,077	11,902	19,175	7,962	39,039
1999			13,797	7,726	6,071	20,087	33,884
2000			18,563	8,431	10,132	6,764	25,327
2001			54,987	14,132	40,855	4,193	59,180
2002			34,191	8,191	26,001	1,963	36,154
2003			81,803	23,831	57,972	21,494	103,297
Averages							
79-03			49,232	11,956	37,276	14,181	63,413
94-03			47,164	15,067	32,098	14,388	61,552
2004			59,003	22,080	36,923	26,724	85,727

**Appendix C. 1.** Weekly salmon catch and effort in the Alaskan District 111, and Subdistricts 111-32 (Taku Inlet) and 111-34 (Port Snettisham), commercial drift gillnet fishery, 2004.

Catch							Effort		
Week	Start Date	Chinook	Sockeye	Coho	Pink	U. m	Boats	Days Open	Boat Days
District 111 catches									
26	20-Jun	864	6,174	4	7	1,557	54	3.0	162
27	27-Jun	563	9,808	9	547	4,527	66	4.0	264
28	4-Jul	244	13,201	38	4,449	15,931	59	4.0	236
29	11-Jul	144	17,197	345	20,226	34,829	58	3.0	174
30	18-Jul	75	17,154	1,099	17,244	26,425	76	3.0	228
31	25-Jul	97	24,198	3,212	36,974	29,814	108	4.0	432
32	1-Aug	188	54,719	2,223	31,558	9,335	116	4.0	464
33	8-Aug	81	67,654	2,873	27,189	3,547	116	4.0	464
34	15-Aug	26	25,661	3,113	11,767	1,586	81	4.0	324
35	22-Aug	2	3,718	4,935	308	513	37	3.0	111
36	29-Aug	5	1,341	8,160	3	914	41	3.0	123
37	5-Sep	2	219	3,780	0	1,101	31	4.0	124
38	12-Sep	0	165	10,968	0	1,175	32	4.0	128
39	19-Sep	0	45	4,030	0	119	20	4.0	80
40	26-Sep	0	0	415	0	14	4	4.0	16
41	3-Oct	0	0	85	0	0	3	4.0	12
Total		2,291	241,254	45,289	150,272	131,387		59.0	3,342
Alaska Hatchery Contributions for Large Chinook and Coho									
		Large Chinook		Coho					
		Hatchery	Wild	Hatchery	Wild				
26	20-Jun	113	751	0	4				
27	27-Jun	0	563	0	9				
28	4-Jul	0	244	0	38				
29	11-Jul	121	23	0	345				
30	18-Jul	56	19	0	1,099				
31	25-Jul	40	57	0	3,212				
32	1-Aug	0	188	0	2,223				
33	8-Aug	0	81	0	2,873				
34	15-Aug	0	26	396	2,715				
35	22-Aug	0	2	0	4,935				
36	29-Aug	0	5	162	7,998				
37	5-Sep	0	2	0	3,780				
38	12-Sep	0	0	251	10,717				
39	19-Sep	0	0	0	4,030				
40	26-Sep	0	0	0	415				
41	3-Oct	0	0	0	85				
Total		330	1,961	811	44,478				
Subdistrict 111-32 Catches (Taku Inlet)									
26	20-Jun	853	6,027	4	7	1,475	63	4.0	252
27	27-Jun	543	9,264	9	427	3,768	53	4.0	212
28	4-Jul	200	10,321	33	2,955	9,884	56	3.0	168
29	11-Jul	110	13,645	252	12,730	25,015	51	2.0	102
30	18-Jul	9	7,334	171	5,725	8,661	38	2.0	76
31	25-Jul	13	5,512	206	3,593	3,527	43	2.0	86
32	1-Aug	1	7,398	545	4,068	1,017	36	3.0	108
33	8-Aug	1	6,370	1,146	1,474	1,107	17	4.0	68
34	15-Aug	1	1,916	1,175	493	143	30	3.0	90
35	22-Aug	1	2,290	4,319	29	252	35	3.0	105
36	29-Aug	0	1,072	7,625	0	742	31	4.0	124
37	5-Sep	2	219	3,780	0	1,101	32	4.0	128
38	12-Sep	0	165	10,968	0	1,175	20	4.0	80
39	19-Sep	0	45	4,030	0	119	4	4.0	16
40	26-Sep	0	0	415	0	14	3	4.0	12
41	3-Oct	0	0	85	0	0			
Total		1,734	71,578	34,763	31,501	58,000		60.0	1,627
Subdistrict 111-34 Catches (Port Snettisham)									
32	1-Aug	26	11,873	196	2,783	927	42	4.0	168
33	8-Aug	30	34,812	549	8,990	818	74	4.0	296
34	15-Aug	16	15,946	430	4,078	571	44	4.0	176
35-36	22-Aug	6	883	130	43	64	3	6.0	15
Total		78	63,514	1,305	15,894	2,380		18.0	655

**Appendix C. 2** Estimate of the proportion of natural and planted sockeye salmon stock groups harvested in the Alaskan District 111 commercial drift gillnet fishery by week, 2004.

Data based on analysis of scale patterns, otolith marks, and incidence of brain parasites. Does not include catches inside Port Snettisham

Week	Kuthai	King	Little	Tatsamenic		Total		Crescent	Speel	Wild	U.S.
		Salmon	Trapper	Mainstem	Wild	Planted	Taku			Snett.	Hatchery
26	0.494	0.187	0.156	0.094	0.029	0.000	0.959	0.013	0.018	0.032	0.009
27	0.315	0.199	0.081	0.290	0.050	0.008	0.943	0.007	0.042	0.049	0.008
28	0.200	0.170	0.121	0.338	0.045	0.000	0.873	0.008	0.057	0.065	0.062
29	0.103	0.085	0.104	0.517	0.049	0.005	0.863	0.017	0.038	0.055	0.082
30	0.041	0.025	0.018	0.378	0.051	0.011	0.521	0.008	0.059	0.067	0.412
31	0.007	0.015	0.000	0.196	0.027	0.004	0.248	0.022	0.069	0.090	0.661
32	0.000	0.000	0.025	0.136	0.027	0.003	0.191	0.003	0.044	0.047	0.762
33	0.000	0.000	0.019	0.188	0.050	0.001	0.259	0.010	0.016	0.026	0.716
34	0.000	0.000	0.016	0.061	0.054	0.004	0.135	0.018	0.010	0.027	0.837
35	0.000	0.000	0.000	0.170	0.122	0.000	0.292	0.037	0.008	0.044	0.663
36	0.000	0.000	0.000	0.170	0.122	0.000	0.292	0.037	0.008	0.044	0.663
37	0.000	0.000	0.000	0.170	0.122	0.000	0.292	0.037	0.008	0.044	0.663
38	0.000	0.000	0.000	0.170	0.122	0.000	0.292	0.037	0.008	0.044	0.663
39	0.000	0.000	0.000	0.170	0.122	0.000	0.292	0.037	0.008	0.044	0.663
Total	0.064	0.043	0.041	0.233	0.042	0.004	0.427	0.011	0.040	0.051	0.522

**Appendix C. 3.** Weekly stock-specific catch of wild and planted Taku River and Port Snettisham sockeye salmon harvested in the Alaskan District 111 commercial drift gillnet fishery, 2004.

Data based on analysis of scale patterns, otolith marks, and incidence of brain parasites. Does not include catches inside Port Snettisham

Week	Kuthai	King	Little	Tatsamenic		Total		Crescent	Speel	Wild	U.S.
		Salmon	Trapper	Mainstem	Wild	Planted	Taku			Snett.	Hatchery
26	3,050	1,152	960	578	180	1	5,922	83	114	197	56
27	3,090	1,951	797	2,840	493	79	9,251	70	410	479	78
28	2,635	2,243	1,592	4,462	593	0	11,525	107	755	862	814
29	1,772	1,455	1,794	8,887	844	91	14,842	291	660	951	1,404
30	698	421	306	6,443	880	187	8,935	138	1,006	1,144	7,075
31	168	357	8	4,745	642	90	6,009	520	1,661	2,181	15,993
32	0	0	1,057	5,832	1,154	140	8,183	137	1,882	2,019	32,644
33	0	0	636	6,183	1,626	47	8,492	339	509	848	23,502
34	0	0	156	591	526	40	1,313	173	93	266	8,136
35	0	0	0	497	356	0	853	108	22	130	1,937
36	0	0	0	214	153	0	367	46	9	56	833
37	0	0	0	37	27	0	64	8	2	10	145
38	0	0	0	28	20	0	48	6	1	7	109
39	0	0	0	8	5	0	13	2	0	2	30
Total	11,413	7,579	7,307	41,342	7,501	676	75,818	2,028	7,124	9,153	92,756

**Appendix C. 4.** Weekly salmon catch and effort in the Canadian commercial fishery in the Taku River, 2004.

Week	Start Date	Catch						Effort		
		Chinook		Sockeye	Coho	Pink	Chum	Average Permits	Days Fished	Permit Days
		Large	non large							
26	20-Jun	647	153	2,020	0	0	0	9.75	4.00	39.00
27	27-Jun	695	103	1,845	2	0	0	7.20	5.00	36.00
28	4-Jul	436	56	1,605	9	0	0	9.67	3.00	29.00
29	11-Jul	221	16	3,169	103	0	0	10.00	4.00	40.00
30	18-Jul	66	6	3,763	479	0	0	10.25	4.00	41.00
31	25-Jul	13	1	2,881	523	0	0	11.00	2.00	22.00
32	1-Aug	4	0	1,739	528	0	0	11.50	2.00	23.00
33	8-Aug	0	0	1,676	743	0	0	8.00	2.00	16.00
34	15-Aug	0	0	780	712	0	0	5.50	4.00	22.00
35	22-Aug	0	0	589	2,036	0	0	3.20	5.00	16.00
36	29-Aug	0	0	81	831	0	0	2.00	5.00	10.00
Total		2,082	335	20,148	5,966	0	0		40.00	294.00



**Appendix C. 5.** Weekly stock proportions of sockeye salmon harvested in the Canadian commercial fishery in the Taku River, 2004.

Data based on analysis of scale patterns and thermal marks.

Week	Start Date	Kuthai	King Salmon	Little Trapper		Tatsamenie	
				Wild	Mainstem	Wild	Planted
26	20-Jun	0.470	0.132	0.103	0.236	0.059	0.000
27	27-Jun	0.392	0.245	0.155	0.190	0.018	0.000
28	4-Jul	0.248	0.151	0.330	0.145	0.126	0.000
29	11-Jul	0.169	0.118	0.253	0.387	0.073	0.000
30	18-Jul	0.113	0.006	0.160	0.721	0.000	0.000
31	25-Jul	0.115	0.019	0.000	0.835	0.000	0.031
32	1-Aug	0.011	0.010	0.000	0.917	0.020	0.042
33	8-Aug	0.000	0.000	0.060	0.898	0.000	0.042
34	15-Aug	0.000	0.000	0.086	0.893	0.000	0.021
35	22-Aug	0.000	0.000	0.083	0.892	0.000	0.025
36	29-Aug	0.000	0.000	0.083	0.892	0.000	0.025
Total		0.168	0.071	0.132	0.586	0.031	0.013

**Appendix C. 6.** Weekly stock specific catch of sockeye salmon in the Canadian commercial fishery in the Taku River, 2004.

Data based on analysis of scale patterns and thermal marks.

Week	Start Date	Kuthai	King Salmon	Little Trapper		Tatsamenie	
				Wild	Mainstem	Wild	Planted
26	20-Jun	949	267	209	476	120	0
27	27-Jun	724	452	285	351	32	0
28	4-Jul	398	243	530	233	202	0
29	11-Jul	535	373	803	1,227	231	0
30	18-Jul	425	23	602	2,713	0	0
31	25-Jul	331	56	0	2,404	-1	90
32	1-Aug	19	18	0	1,595	35	72
33	8-Aug	0	0	101	1,504	0	71
34	15-Aug	0	0	67	697	0	16
35	22-Aug	0	0	49	525	0	15
36	29-Aug	0	0	7	72	0	2
Total		3,381	1,430	2,653	11,799	620	266

**Appendix C. 7. Weekly salmon catch and effort in the Canadian test fishery in the Taku River, 2004.**

A maximum of two drift nets were used; these were supplemented in the fall by up to three set nets.

Week	Start Date	Catch						Effort		
		Chinook		Sockeye	Coho	Pink	Chum	Average Permits	Days Fished	Permit Days
		Large	non large							
19	2-May	83	24	0	0	0	0	1	5	5
20	9-May	168	32	0	0	0	0	1	4	4
21	16-May	199	37	0	0	0	0	1	4	4
22	23-May	294	66	0	0	0	0	1	4	4
23	30-May	336	52	0	0	0	0	1	4	4
24	6-Jun	243	46	3	0	0	0	1	7	7
25	13-Jun	166	37	16	0	0	0	1	3	3
36	29-Aug	0	0	62	472	0	0	1	6	6
37	5-Sep	0	0	10	629	0	0	1	6	6
38	12-Sep	0	0	0	717	0	0	1	6	6
39	19-Sep	0	0	0	226	0	0	1	5	5
40	26-Sep	0	0	0	891	0	0	1	6	6
41	3-Oct	0	0	0	333	0	0	1	5	5
Total		1,489	294	91	3,268	0	0	13	65	65

**Appendix C. 8.** Mark-recapture estimate of above border run of Chinook, sockeye, and coho salmon in the Taku River, 2004.

		Above	Canadian Harvests				Above	
Recovery	Start	Border					Border	
Week	Date	Run	Commercial	Test	Aboriginal	Recreational	Escapement	
Inseason Chinook Estimates								
19	2-May			82				
20	9-May	5,270		168			5,020	
21	16-May	14,431		200			14,231	
22	23-May	45,885		282			45,603	
23	30-May	30,104		270			29,834	
24	6-Jun	40,120		243	227		39,650	
25	13-Jun	40,623		155	38		40,430	
26	20-Jun	46,114						
Inseason Estimate								
Inseason Estimate		46,114		1,400	265	300	44,149	
Final escapement estimate							75,032; SE 10,280	
Sockeye								
23	30-May	88					88	
24	6-Jun	930	0	3			927	
25	13-Jun	7,307	0	16			7,291	
26	20-Jun	7,637	2,020	0			5,617	
27	27-Jun	2,456	1,845	0			611	
28	4-Jul	13,439	1,605	0		21	11,813	
29	11-Jul	25,553	3,169	0		277	22,107	
30	18-Jul	14,604	3,763	0		149	10,692	
31	25-Jul	14,878	2,881	0		213	11,784	
32	1-Aug	10,348	1,739	0			8,609	
33	8-Aug	13,023	1,676	0			11,347	
34	15-Aug	7,791	780	0			7,011	
35	22-Aug	5,803	589	0			5,214	
36	29-Aug	3,110	81	62			2,967	
37	5-Sep	375	0	10	120		245	
38	12-Sep	221					221	
39	19-Sep	36					36	
40	26-Sep	90					90	
41	3-Oct	18					18	
95% C.I.		117,383	134,515	20,148	91	120	660	106,323
Total Estimate		127,047						
Coho								
28-41	27-Jun	141,837	5,966	3,268	450		132,153	
Total Estimate		141,837	5,966	3,268	450		132,153	

Appendix C. 9. Daily counts of adult sockeye salmon passing through Tatsamenic weir, 2004.

Date	Count	Cumulative	
		Count	Percent
11-Aug	--- Weir Fish Tight ---		
12-Aug	0	0	0.0
13-Aug	3	3	0.2
14-Aug	2	5	0.3
15-Aug	5	10	0.5
16-Aug	26	36	1.8
17-Aug	51	87	4.5
18-Aug	36	123	6.3
19-Aug	20	143	7.3
20-Aug	67	210	10.8
21-Aug	58	268	13.7
22-Aug	10	278	14.2
23-Aug	12	290	14.9
24-Aug	0	290	14.9
25-Aug	2	292	15.0
26-Aug	63	355	18.2
27-Aug	45	400	20.5
28-Aug	89	489	25.1
29-Aug	79	568	29.1
30-Aug	66	634	32.5
31-Aug	203	837	42.9
1-Sep	105	942	48.3
2-Sep	184	1,126	57.7
3-Sep	102	1,228	62.9
4-Sep	58	1,286	65.9
5-Sep	61	1,347	69.0
6-Sep	33	1,380	70.7
7-Sep	12	1,392	71.3
8-Sep	88	1,480	75.9
9-Sep	47	1,527	78.3
10-Sep	52	1,579	80.9
11-Sep	31	1,610	82.5
12-Sep	24	1,634	83.8
13-Sep	47	1,681	86.2
14-Sep	14	1,695	86.9
15-Sep	44	1,739	89.1
16-Sep	14	1,753	89.9
17-Sep	20	1,773	90.9
18-Sep	15	1,788	91.6
19-Sep	25	1,813	92.9
20-Sep	8	1,821	93.3
21-Sep	36	1,857	95.2
22-Sep	14	1,871	95.9
23-Sep	18	1,889	96.8
24-Sep	6	1,895	97.1
25-Sep	19	1,914	98.1
26-Sep	16	1,930	98.9
27-Sep	4	1,934	99.1
28-Sep	3	1,937	99.3
29-Sep	4	1,941	99.5
30-Sep	7	1,948	99.8
1-Oct	3	1,951	100.0
2-Oct	0	1,951	100.0
3-Oct	0	1,951	100.0
4-Oct	0	1,951	100.0
5-Oct	--- Weir Pulled ---		
Counts		1,951	
Outlet spawners		<15	
Broodstock	females	-210	
	males	-148	
	released	-129	
	mortalities	-107	
		-594	
Spawners		1,357	

**Appendix C. 10.** Daily counts of adult sockeye salmon passing through Little Trapper Lake weir, 2004.

Date	Count	Cumulative	
		Count	Percent
20-Jul	---Weir Fish Tight---		
21-Jul	0	0	0.00
22-Jul	0	0	0.00
23-Jul	0	0	0.00
24-Jul	0	0	0.00
25-Jul	0	0	0.00
26-Jul	0	0	0.00
27-Jul	32	32	0.33
28-Jul	52	84	0.87
29-Jul	72	156	1.62
30-Jul	46	202	2.10
31-Jul	44	246	2.56
1-Aug	404	650	6.76
2-Aug	160	810	8.43
3-Aug	809	1,619	16.84
4-Aug	335	1,954	20.33
5-Aug	677	2,631	27.37
6-Aug	508	3,139	32.65
7-Aug	873	4,012	41.74
8-Aug	995	5,007	52.09
9-Aug	417	5,424	56.42
10-Aug	424	5,848	60.83
11-Aug	464	6,312	65.66
12-Aug	313	6,625	68.92
13-Aug	266	6,891	71.68
14-Aug	298	7,189	74.78
15-Aug	528	7,717	80.28
16-Aug	200	7,917	82.36
17-Aug	444	8,361	86.98
18-Aug	224	8,585	89.31
19-Aug	87	8,672	90.21
20-Aug	103	8,775	91.28
21-Aug	127	8,902	92.60
22-Aug	32	8,934	92.94
23-Aug	88	9,022	93.85
24-Aug	50	9,072	94.37
25-Aug	13	9,085	94.51
26-Aug	47	9,132	95.00
27-Aug	40	9,172	95.41
28-Aug	71	9,243	96.15
29-Aug	79	9,322	96.97
30-Aug	44	9,366	97.43
31-Aug	47	9,413	97.92
1-Sep	29	9,442	98.22
2-Sep	27	9,469	98.50
3-Sep	65	9,534	99.18
4-Sep	45	9,579	99.65
5-Sep	27	9,606	99.93
6-Sep	2	9,608	99.95
7-Sep	0	9,608	99.95
8-Sep	0	9,608	99.95
9-Sep	3	9,611	99.98
10-Sep	2	9,613	100.00
11-Sep	--- weir pulled ---		
Total		9,613	



**Appendix C. 11.** Daily counts of adult sockeye salmon passing through King Salmon Lake weir, 2004.

Date	Cumulative		Percent
	Count	Count	
6-Jul	--- weir fish tight ---		
7-Jul	0	0	0.00
8-Jul	0	0	0.00
9-Jul	0	0	0.00
10-Jul	26	26	0.01
11-Jul	83	109	0.02
12-Jul	0	109	0.02
13-Jul	0	109	0.02
14-Jul	0	109	0.02
15-Jul	0	109	0.02
16-Jul	236	345	0.07
17-Jul	211	556	0.11
18-Jul	169	725	0.14
19-Jul	285	1,010	0.20
20-Jul	204	1,214	0.24
21-Jul	221	1,435	0.29
22-Jul	319	1,754	0.35
23-Jul	285	2,039	0.41
24-Jul	121	2,160	0.43
25-Jul	307	2,467	0.49
26-Jul	257	2,724	0.54
27-Jul	37	2,761	0.55
28-Jul	221	2,982	0.60
29-Jul	21	3,003	0.60
30-Jul	31	3,034	0.61
31-Jul	54	3,088	0.62
1-Aug	250	3,338	0.67
2-Aug	79	3,417	0.68
3-Aug	34	3,451	0.69
4-Aug	254	3,705	0.74
5-Aug	62	3,767	0.75
6-Aug	272	4,039	0.81
7-Aug	126	4,165	0.83
8-Aug	133	4,298	0.86
9-Aug	173	4,471	0.89
10-Aug	107	4,578	0.91
11-Aug	108	4,686	0.94
12-Aug	60	4,746	0.95
13-Aug	23	4,769	0.95
14-Aug	49	4,818	0.96
15-Aug	72	4,890	0.98
16-Aug	8	4,898	0.98
17-Aug	7	4,905	0.98
18-Aug	100	5,005	1.00
19-Aug	0	5,005	1.00
20-Aug	0	5,005	1.00
21-Aug	0	5,005	1.00
22-Aug	0	5,005	1.00
23-Aug	0	5,005	1.00
24-Aug	0	5,005	1.00
25-Aug	0	5,005	1.00
26-Aug	0	5,005	1.00
27-Aug	0	5,005	1.00
28-Aug	0	5,005	1.00
29-Aug	--- weir pulled ---		
Total	5,005		

**Appendix C. 12.** Daily counts of adult salmon passing through the Kuthai Lake weir, 2004.

Date	Cumulative		Percent
	Count	Count	
6-Jul	---Weir Fish Tight---		
7-Jul	0	0	0.00
8-Jul	0	0	0.00
9-Jul	0	0	0.00
10-Jul	0	0	0.00
11-Jul	0	0	0.00
12-Jul	0	0	0.00
13-Jul	0	0	0.00
14-Jul	0	0	0.00
15-Jul	0	0	0.00
16-Jul	0	0	0.00
17-Jul	0	0	0.00
18-Jul	0	0	0.00
19-Jul	0	0	0.00
20-Jul	0	0	0.00
21-Jul	0	0	0.00
22-Jul	0	0	0.00
23-Jul	0	0	0.00
24-Jul	383	383	24.27
25-Jul	134	517	32.76
26-Jul	75	592	37.52
27-Jul	68	660	41.83
28-Jul	74	734	46.51
29-Jul	111	845	53.55
30-Jul	50	895	56.72
31-Jul	13	908	57.54
1-Aug	9	917	58.11
2-Aug	78	995	63.05
3-Aug	52	1,047	66.35
4-Aug	56	1,103	69.90
5-Aug	48	1,151	72.94
6-Aug	27	1,178	74.65
7-Aug	12	1,190	75.41
8-Aug	17	1,207	76.49
9-Aug	136	1,343	85.11
10-Aug	47	1,390	88.09
11-Aug	72	1,462	92.65
12-Aug	17	1,479	93.73
13-Aug	4	1,483	93.98
14-Aug	2	1,485	94.11
15-Aug	0	1,485	94.11
16-Aug	0	1,485	94.11
17-Aug	11	1,496	94.80
18-Aug	2	1,498	94.93
19-Aug	0	1,498	94.93
20-Aug	0	1,498	94.93
21-Aug	6	1,504	95.31
22-Aug	16	1,520	96.32
23-Aug	0	1,520	96.32
24-Aug	0	1,520	96.32
25-Aug	2	1,522	96.45
26-Aug	51	1,573	99.68
27-Aug	0	1,573	99.68
28-Aug	0	1,573	99.68
29-Aug	0	1,573	99.68
30-Aug	5	1,578	100.00
31-Aug	--- Weir Pulled ---		
Total count		1,578	
Harvest above weir		0	
Escapement		1,578	

**Appendix C. 13.** Daily counts of Chinook salmon carcasses at the Nakina River weir, 2004.

Date	Count			Cumulative	
	Female	Male	Combined	Count	Percent
3-Aug	18	48	66	66	0.02
4-Aug	29	64	93	159	0.04
5-Aug	47	103	150	309	0.08
6-Aug	55	100	155	464	0.11
7-Aug	53	123	176	640	0.16
8-Aug	55	157	212	852	0.21
9-Aug	68	183	251	1,103	0.27
10-Aug	76	219	295	1,398	0.34
11-Aug	93	257	350	1,748	0.43
12-Aug	82	187	269	2,017	0.49
13-Aug	79	269	348	2,365	0.58
14-Aug	64	263	327	2,692	0.66
15-Aug	70	243	313	3,005	0.74
16-Aug	62	200	262	3,267	0.80
17-Aug	61	194	255	3,522	0.86
18-Aug	53	173	226	3,748	0.92
19-Aug	43	108	151	3,899	0.95
20-Aug	28	54	82	3,981	0.98
21-Aug	31	39	70	4,051	0.99
22-Aug	7	9	16	4,067	1.00
23-Aug	5	11	16	4,083	1.00
Total	1,079	3,004	4,083		

**Appendix D. 1. Salmon catches and effort in the Alaskan District 111 commercial drift gillnet fishery, 1960-2004.**

S. Chum and F. Chum refer to Summer and Fall runs of these fish, fish harvested prior to week 34 are considered summer chum, and fish harvested in week 34 and beyond are considered fall chum.

Days open are for the entire district and include openings to harvest spawner chinook salmon, 1960-1975.

Year	Catch						Effort	
	Chinook	Sockeye	Coho	Pink	S. Chum	F. Chum	Boat Days	Days Open
District 111 Catches								
1960	8,810	42,819	22,374	33,155	8,754	33,098		60.0
1961	7,434	45,981	15,486	41,455	8,578	15,855		62.0
1962	5,931	36,745	15,661	17,280	7,453	13,182		52.0
1963	2,652	24,119	10,855	21,392	12,335	7,779		54.0
1964	2,509	34,140	29,315	26,593	4,970	7,883		56.0
1965	4,170	27,569	32,667	2,768	3,842	7,691		63.0
1966	4,829	33,925	26,065	23,833	5,015	30,118		64.0
1967	5,417	17,735	40,391	12,372	2,183	20,651		53.0
1968	4,904	19,501	39,103	67,365	5,747	16,143		60.0
1969	6,986	41,169	10,802	73,927	4,851	10,198	1,518	41.5
1970	3,357	50,922	44,960	197,017	19,593	90,797	2,688	53.0
1971	6,958	66,181	41,830	31,484	31,813	59,332	3,053	55.0
1972	10,955	80,404	49,780	144,339	67,126	80,831	3,103	51.0
1973	9,799	85,317	35,453	58,186	33,296	75,949	3,286	41.0
1974	2,908	38,670	38,667	57,731	11,263	75,423	2,315	29.5
1975	2,182	32,513	1,185	9,567	2,091	587	1,084	15.5
1976	1,757	61,749	41,729	14,962	6,027	75,776	1,914	25.0
1977	1,068	70,097	54,917	88,578	8,995	52,107	2,258	27.0
1978	1,926	55,398	31,944	51,385	9,076	27,178	2,174	26.0
1979	3,701	122,148	16,194	152,836	5,936	55,261	2,269	28.8
1980	2,251	123,451	41,677	296,572	33,627	159,020	4,123	30.9
1981	1,721	49,942	26,711	254,856	22,546	53,892	2,687	30.0
1982	3,057	83,625	29,072	109,297	14,867	22,741	2,433	35.5
1983	888	31,821	21,455	66,239	6,160	9,104	1,274	33.0
1984	1,773	77,233	33,836	145,971	45,811	40,930	2,757	52.5
1985	2,636	88,077	55,597	311,248	58,972	47,748	3,264	48.0
1986	2,584	73,061	30,512	16,568	29,909	28,883	2,129	32.8
1987	2,076	75,212	35,219	363,439	57,280	64,380	2,514	34.8
1988	1,779	38,923	44,881	157,831	80,307	59,271	2,135	32.0
1989	1,811	74,019	51,812	180,597	18,022	18,955	2,333	41.0
1990	3,480	126,884	67,530	153,036	112,336	33,463	3,188	38.3
1991	3,217	109,877	126,436	74,183	147,404	13,771	4,145	57.0
1992	2,341	135,411	172,662	314,445	97,725	14,802	4,550	50.0
1993	6,748	171,556	65,536	17,081	156,033	10,447	3,827	43.0
1994	5,047	105,861	188,501	401,525	198,002	16,169	5,078	66.0
1995	4,660	103,377	83,626	41,269	339,178	10,920	4,034	49.0
1996	2,659	199,014	33,633	12,660	347,612	6,455	3,229	46.0
1997	2,804	94,745	3,515	51,424	173,804	3,060	2,107	33.0
1998	794	69,677	28,713	168,283	291,416	4,695	3,070	48.0
1999	1,841	79,425	17,273	59,316	429,213	4,639	2,841	59.0
2000	1,137	168,272	7,546	54,716	665,582	3,013	2,919	40.0
2001	1,696	290,450	22,529	122,829	235,276	1,693	4,731	54.0
2002	1,840	178,488	39,823	77,562	230,092	929	4,095	62.0
2003	1,465	205,433	23,707	112,395	169,214	1,206	3,977	73.5
Averages								
60-03	3,604	85,021	42,072	106,581	95,894	31,501	2,946	45.61
94-03	2,394	149,474	44,887	110,198	307,939	5,278	3,608	53.05
2004	2,291	241,254	45,289	150,272	122,418	8,969	3,342	59.00

Appendix D.1. (continued). Page 2 of 2

Year	Catch						Effort	
	Chinook	Sockeye	Coho	Pink	S. Chum	F. Chum	Boat Days	Days Open
Subdistrict 111-32 Catches (Taku Inlet)								
1960	8,763	26,641	20,282	26,777	4,566	28,720	1,680	60.0
1961	7,269	30,805	14,618	34,615	6,863	14,876	2,901	62.0
1962	5,719	25,969	13,699	10,006	5,418	11,812	1,568	52.0
1963	2,547	16,079	9,406	18,102	8,085	7,071	1,519	51.0
1964	2,482	28,873	28,603	22,177	3,919	7,822	1,491	56.0
1965	4,146	23,828	32,382	2,641	3,604	7,691	1,332	60.0
1966	4,817	28,301	24,153	22,490	4,350	27,327	1,535	58.0
1967	5,351	14,537	39,983	11,619	1,569	20,463	1,663	50.0
1968	4,862	16,952	37,570	55,527	4,646	15,597	2,420	60.0
1969	6,874	38,260	10,131	66,991	4,233	9,926	1,413	42.0
1970	3,073	41,476	37,587	143,886	14,208	76,795	2,425	53.0
1971	6,753	62,459	38,571	30,765	31,110	54,696	2,849	55.0
1972	9,633	62,877	38,568	78,673	45,955	60,097	2,797	51.0
1973	9,525	80,063	29,770	55,234	30,817	61,025	3,135	41.0
1974	2,280	26,256	27,670	32,684	6,469	51,063	1,741	30.0
1975	1,998	28,201	429	8,084	1,639	31	986	15.0
1976	1,693	51,674	31,641	11,868	3,766	42,674	1,582	23.0
1977	754	47,512	48,403	67,072	5,436	43,595	1,879	27.0
1978	1,642	43,795	21,620	41,624	7,142	18,101	1,738	24.0
1979	3,016	103,043	12,741	114,324	4,317	46,142	2,011	29.0
1980	1,986	108,577	35,814	241,085	25,779	131,126	3,634	31.0
1981	1,325	39,963	20,936	98,524	10,407	40,212	1,740	22.0
1982	2,841	75,012	24,761	77,942	11,558	18,363	2,130	36.0
1983	689	25,957	17,665	40,996	3,171	7,813	1,065	31.0
1984	1,414	59,229	25,951	83,028	28,214	27,967	2,120	39.0
1985	2,152	70,160	45,106	176,710	35,897	40,530	2,116	37.0
1986	1,877	60,106	26,474	9,772	14,646	24,790	1,413	30.0
1987	1,534	54,436	23,342	200,203	31,992	28,891	1,517	30.0
1988	949	23,752	33,159	41,625	25,969	27,010	1,213	29.0
1989	1,606	68,104	44,034	141,385	15,254	15,491	1,909	36.0
1990	2,432	110,006	60,078	101,168	88,350	29,099	2,879	38.0
1991	2,614	96,006	118,902	44,347	97,577	12,279	3,324	52.0
1992	1,672	103,238	152,598	180,340	57,153	11,649	3,407	43.0
1993	4,413	144,982	58,062	8,801	101,356	7,760	3,372	43.0
1994	3,051	88,625	156,314	198,507	129,350	12,280	3,960	60.0
1995	3,497	81,266	70,826	18,469	192,557	8,786	3,061	45.0
1996	2,412	188,412	31,828	12,123	294,890	5,245	2,685	41.0
1997	2,724	84,115	2,993	38,794	143,354	1,936	1,761	30.0
1998	634	47,413	24,606	85,269	192,057	2,800	2,007	39.0
1999	1,762	68,914	14,086	43,958	327,706	2,643	2,563	58.0
2000	1,032	127,274	6,299	25,729	453,147	1,311	2,325	38.0
2001	1,290	179,683	12,647	49,174	141,715	1,012	3,635	55.0
2002	1,546	113,110	30,501	40,283	108,171	671	2,792	54.0
2003	1,386	130,303	20,577	77,459	106,373	894	2,685	64.5
Averages								
60-03	3,183	66,960	35,804	65,701	64,426	24,229	2,227	42.74
94-03	1,933	110,912	37,068	58,977	208,932	3,758	2,747	48.45
2004	1,734	71,578	34,763	31,501	53,347	4,653	1,627	53.00



# **Appendix D. 2. Stock proportions and catches of sockeye salmon in the Alaska District 111 commercial drift gillnet fishery, 1983-2004.**

Data based on analysis of scale patterns, otolith marks, and incidence of brain parasites. Does not include catches inside Port Snettisham												
Week	King Kuthai	Salmon	Little Trapper		Mainstem	Tatsamenie		Total Taku	Crescent	Speel	Wild Snett	U.S. Planted
			Wild	Planted		Wild	Planted					
Proportions												
1983								0.755			0.245	
1984								0.758			0.242	
1985								0.838			0.162	
1986	0.061		0.266		0.303	0.204		0.834	0.090	0.076	0.166	
1987	0.078		0.234		0.376	0.031		0.720	0.157	0.123	0.280	
1988	0.118		0.158		0.305	0.082		0.663	0.266	0.071	0.337	
1989 <sup>a</sup>	0.077		a		a	0.156		0.849	0.051	0.100	0.152	
1990	0.036		0.197		0.336	0.286		0.855	0.112	0.033	0.145	
1991	0.039		0.297		0.373	0.232		0.941	0.059	0.000	0.059	
1992	0.048		0.220		0.445	0.191		0.904	0.036	0.060	0.096	
1993	0.062		0.328		0.308	0.123		0.822	0.069	0.109	0.178	
1994	0.110		0.356		0.361	0.091		0.917	0.036	0.022	0.058	0.025
1995	0.046		0.214	0.010	0.428	0.153	0.029	0.880	0.018	0.075	0.093	0.026
1996	0.069		0.117	0.010	0.499	0.232	0.014	0.941	0.013	0.032	0.045	0.014
1997	0.067		0.170	0.011	0.282	0.286	0.011	0.826	0.027	0.026	0.053	0.120
1998	0.087		0.158	0.008	0.209	0.245	0.004	0.710	0.026	0.007	0.033	0.257
1999	0.176		0.259	0.003	0.235	0.119	0.005	0.797	0.049	0.023	0.072	0.131
2000	0.139		0.273	0.002	0.211	0.151	0.008	0.783	0.004	0.054	0.058	0.160
2001	0.076		0.130	0.000	0.268	0.207	0.031	0.713	0.014	0.032	0.046	0.241
2002	0.098		0.254	0.000	0.173	0.126	0.004	0.654	0.014	0.032	0.047	0.299
2003	0.087	0.016	0.225	0.000	0.398	0.033	0.004	0.755	0.009	0.047	0.064	0.181
Averages												
86-03	0.082		0.227		0.324	0.164		0.807	0.059	0.048	0.108	
94-03	0.096		0.216	0.005	0.306	0.164	0.012	0.798	0.021	0.035	0.057	0.145
2004	0.064	0.043	0.041	0.000	0.233	0.042	0.004	0.427	0.011	0.040	0.052	0.522
Catches												
1983								24,025			7,796	
1984								58,543			18,690	
1985								73,809			14,268	
1986	4,489		19,441		22,104	14,900		60,934	6,610	5,516	12,127	
1987	5,893		17,594		28,286	2,352		54,124	11,814	9,274	21,088	
1988	4,598		6,153		11,865	3,194		25,811	10,365	2,748	13,112	
1989 <sup>a</sup>	5,696		a		a	11,536		62,805	3,789	7,425	11,214	
1990	4,539		24,952		42,676	36,332		108,499	14,242	4,143	18,385	
1991	4,295		32,685		40,957	25,475		103,412	6,465	0	6,465	
1992	6,543		29,818		60,224	25,853		122,438	4,912	8,060	12,972	
1993	10,673		56,350		52,876	21,139		141,038	11,877	18,641	30,518	
1994	11,638		37,644		38,179	9,585		97,046	3,859	2,319	6,178	2,637
1995	4,788		22,109	1,017	44,278	15,767	3,049	91,008	1,901	7,741	9,642	2,727
1996	13,742		23,307	1,920	99,231	46,148	2,859	187,207	2,544	6,416	8,960	2,848
1997	6,345		16,105	1,031	26,694	27,107	1,006	78,288	2,558	2,510	5,068	11,389
1998	6,055		11,018	570	14,560	17,040	250	49,493	1,784	500	2,284	17,900
1999	14,016		20,596	247	18,680	9,421	367	63,327	3,879	1,814	5,693	10,405
2000	23,357		45,977	279	35,451	25,347	1,301	131,712	621	9,088	9,709	26,851
2001	22,042		37,862	0	77,938	60,109	9,057	207,008	4,097	9,331	13,428	70,014
2002	17,474		45,308	0	30,819	22,449	660	116,710	2,559	5,779	8,338	53,440
2003	15,462	2,829	39,989	0	70,801	5,876	767	134,276	1,622	8,361	11,431	32,196
Average <sup>b</sup>												
86-03	10,350		28,642		42,095	21,653		104,340	5,395	6,014	11,409	
94-03	13,492		29,992	563	45,663	23,885	2,146	115,752	2,542	5,386	7,928	23,041
2004	11,413	7,579	7,307	0	41,342	7,501	676	75,818	2,028	7,124	9,153	92,756

<sup>a</sup> The Trapper and Mainstem groups were combined in the 1989 analysis and were 45,573 fish.

**Appendix D. 3. Proportion of wild Taku River sockeye salmon in the Alaskan District 111 commercial drift gillnet catch by week, 1983-2004.**

Data based on scale patterns and incidence of brain parasites and includes only wild fish (estimated from thermal mark analysis).

Year	Week									Total
	25	26	27	28	29	30	31	32	33	
1983		0.996	0.842	0.819	0.663	0.527	0.836	0.534	0.719	0.755
1984	0.970	0.956	0.843	0.670	0.588	0.712	0.728	0.809	0.726	0.758
1985	0.999	0.986	0.928	0.974	0.868	0.706	0.737	0.826	0.801	0.838
1986	0.938	0.953	0.873	0.880	0.852	0.777	0.851	0.757	0.893	0.834
1987		0.982	0.901	0.884	0.948	0.414	0.619	0.689	0.841	0.720
1988		0.964	0.886	0.889	0.510	0.643	0.677	0.528	0.478	0.663
1989	0.943	0.989	0.979	0.852	0.835	0.641	0.681	0.919	0.676	0.848
1990	0.874	0.935	0.904	0.773	0.782	0.863	0.943	0.939	0.878	0.855
1991	0.988	0.979	0.953	0.979	0.951	0.933	0.936	0.890	0.885	0.941
1992		0.978	0.985	0.956	0.916	0.943	0.893	0.858	0.766	0.904
1993		0.961	0.901	0.837	0.856	0.781	0.790	0.829	0.738	0.822
1994		1.000	0.981	0.973	0.967	0.870	0.835	0.938	0.804	0.917
1995	0.942	0.889	0.903	0.858	0.872	0.868	0.761	0.759	0.705	0.841
1996	1.000	0.998	0.909	0.974	0.950	0.991	0.914	0.945	0.879	0.953
1997	0.992	0.970	0.910	0.926	0.951	0.939	0.939	0.925	0.872	0.938
1998		0.964	0.974	0.978	0.971	0.949	0.948	0.942	0.997	0.955
1999		0.966	0.988	0.953	0.934	0.917	0.878	0.833	0.732	0.917
2000		0.973	0.962	0.958	0.929	0.898	0.872	0.907	0.908	0.931
2001	0.995	0.998	0.948	0.888	0.908	0.930	0.961	0.945	0.858	0.936
2002	0.986	0.989	0.993	0.970	0.872	0.946	0.829	0.880	0.851	0.933
2003	1.000	0.987	0.961	0.994	0.970	0.929	0.883	0.795	0.236	0.931
Average										
83-03	0.969	0.972	0.930	0.904	0.862	0.818	0.834	0.831	0.774	0.866
94-03	0.986	0.973	0.953	0.947	0.932	0.924	0.882	0.887	0.784	0.925
2004		0.968	0.950	0.930	0.939	0.884	0.731	0.799	0.909	0.891

**Appendix D. 4. Salmon catch in the U.S. subsistence and personal use fisheries in the Taku River, 1967-2004.**

The subsistence fishery was open 1967 to 1976 and 1985 and the personal use fishery was open 1989-2010.

The harvests are minimum estimates because not all permits are filled out and returned.

Year	Catch					Permits
	Chinook	Sockeye	Coho	Pink	Chum	
1967	0	103	221	9	25	
1968	3	41	196	19	10	
1969	0	122	8	11	0	
1970	0	304	0	20	8	
1971	0	512	0	42	0	
1972	0	554	0	103	7	
1973	0	1,227	0	64	14	
1974	0	1,431	0	118	5	
1975	0	170	0	3	0	
1976	0	351	4	22	0	
1985	0	920	35	16	1	54
1989	25	562	57	591	16	75
1990	26	793	103	111	46	95
1991	25	800	86	97	2	88
1992	21	1,217	88	100	0	125
1993	9	1,201	25	93	3	128
1994	21	1,111	93	76	3	116
1995	18	990	97	40	6	106
1996	33	1,189	67	110	5	130
1997	16	1,053	27	86	1	123
1998	15	1,153	86	225	2	130
1999	22	1,254	44	105	3	147
2000	22	1,134	31	68	7	128
2001	8	1,462	22	195	11	163
2002	14	1,289	68	59	20	136
2003	13	1,126	57	237	2	123
Averages						
67-03	11	849	54	101	8	
94-03	18	1,176	59	120	6	130
2004	25	1,150	120	109	3	131

**Appendix D. 5.** Salmon catch and effort in ther Canadian commercial fishery in the Taku River, 1979-2004.

Year	Catch						Effort	
	Chinook		Sockeye	Coho	Pink	Chum	Boat Days	Days Open
	Large	non large						
1979	97		13,578	6,006	13,661	15,474	599	50.0
1980	225		22,602	6,405	26,821	18,516	476	39.0
1981	159		10,922	3,607	10,771	5,591	243	31.3
1982	54		3,144	51	202	3	38	13.0
1983	156	400	17,056	8,390	1,874	1,760	390	64.0
1984	294	221	27,242	5,357	6,964	2,492	288	30.0
1985	326	24	14,244	1,770	3,373	136	178	16.0
1986	275	77	14,739	1,783	58	110	148	17.0
1987	127	106	13,554	5,599	6,250	2,270	280	26.0
1988	555	186	12,014	3,123	1,030	733	185	14.7
1989	895	139	18,545	2,876	695	42	271	25.3
1990	1,258	128	21,100	3,207	378	12	295	28.3
1991	1,177	432	25,067	3,415	296	2	284	25.0
1992	1,445	147	29,472	4,077	0	7	291	27.0
1993	1,619	171	33,217	3,033	16	15	363	34.0
1994	2,065	235	28,762	14,531	168	18	497	74.0
1995	1,577	298	32,640	13,629	2	1	428	51.1
1996	3,331	144	41,665	5,028	0	0	415	65.0
1997	2,731	84	24,003	2,594	0	1	394	47.0
1998	1,107	227	19,038	5,090	0	2	299	42.0
1999	908	257	20,681	4,416	0	0	300	34.0
2000	1,576	87	28,009	4,395	0	0	351	39.0
2001	1,458	118	47,660	2,568	0	0	382	41.5
2002	1,561	291	31,053	3,082	0	0	286	33.0
2003	1,894	547	32,730	3,168	0	0	275	44.0
Averages								
79-03	1,075	206	23,318	4,691	2,902	1,887	318	36
94-03	1,821	229	30,644	5,858	17	2	363	47
2004	2,082	335	20,148	5,966	0	0	294	40

**Appendix D. 6. Sockeye salmon stock proportions and catch by stock in the Canadian commercial fishery on the Taku River, 1986-2004.**

Data based on scale pattern, brain parasite, and thermal mark analyses.

Year	King		Little Trapper		Mainstem	Tatsamenie		Total Wild	Total Planted
	Kuthai	Salmon	Wild	Planted		Wild	Planted		
Proportions									
1986	0.111		0.397		0.350	0.143		1.000	
1987	0.062		0.201		0.649	0.088		1.000	
1988	0.143		0.417		0.343	0.098		1.000	
1989 <sup>a</sup>	0.053		a		a	0.203		1.000	
1990	0.112		0.388		0.338	0.163		1.000	
1991	0.064		0.308		0.452	0.176		1.000	
1992	0.092		0.240		0.569	0.099		1.000	
1993	0.126		0.392		0.432	0.049		1.000	
1994	0.158		0.482		0.302	0.058		1.000	
1995	0.047		0.427	0.010	0.373	0.112	0.031	0.959	0.041
1996	0.105		0.221	0.008	0.442	0.215	0.010	0.982	0.018
1997	0.120		0.282	0.019	0.277	0.294	0.008	0.973	0.027
1998	0.225		0.207	0.028	0.254	0.283	0.003	0.969	0.031
1999	0.389		0.305	0.008	0.145	0.147	0.006	0.986	0.014
2000	0.172		0.205	0.000	0.326	0.282	0.016	0.984	0.016
2001	0.184		0.168	0.000	0.364	0.246	0.039	0.961	0.039
2002	0.316		0.428	0.000	0.192	0.062	0.002	0.998	0.002
2003	0.231	0.023	0.378	0.000	0.271	0.089	0.008	0.992	0.008
Averages <sup>b</sup>									
86-03	0.156		0.320		0.357	0.153		0.988	
94-03	0.195		0.310	0.008	0.294	0.179	0.014	0.980	0.022
2004	0.168	0.071	0.132	0.000	0.586	0.031	0.013	0.987	0.013
Catch									
1986	1,629		5,855		5,152	2,103		14,739	
1987	834		2,728		8,793	1,199		13,554	
1988	1,715		5,005		4,122	1,172		12,014	
1989 <sup>a</sup>	990		a		a	3,763		18,545	
1990	2,355		8,183		7,131	3,431		21,100	
1991	1,601		7,721		11,327	4,418		25,067	
1992	2,699		7,085		16,764	2,924		29,472	
1993	4,192		13,036		14,347	1,641		33,217	
1994	4,544		13,858		8,684	1,676		28,762	
1995	1,528		13,934	331	12,185	3,659	1,003	31,306	1,334
1996	4,357		9,195	331	18,422	8,959	401	40,933	732
1997	2,891		6,758	456	6,637	7,060	201	23,346	657
1998	4,279		3,944	533	4,829	5,397	56	18,449	589
1999	8,044		6,314	171	2,992	3,034	126	20,384	297
2000	4,809		5,745	0	9,122	7,897	436	27,573	436
2001	8,748		8,005	0	17,330	11,709	1,868	45,792	1,868
2002	9,826		13,305	0	5,948	1,925	49	31,004	49
2003	7,568	755	12,383	0	8,855	2,902	267	32,463	267
Averages <sup>b</sup>									
86-03	4,216		8,419		9,570	4,184		26,434	
94-03	5,664		9,352	202	9,506	5,424	490	30,021	692
2004	3,381	1,430	2,653	0	11,799	620	266	19,882	266

<sup>a</sup> The Trapper and Mainstem groups were combined in the 1989 analysis with 13,792 fish or .744 proportion.

<sup>b</sup> Averages do not include 1989.



**Appendix D. 7. Salmon catches in the Canadian Aboriginal fishery on the Taku River, 1980-2004.**

Year	Chinook		Sockeye	Coho	Pink	Chum
	Large	non large				
1980	85		150	0	0	15
1981						
1982						
1983	9		0	0	0	0
1984	0		50	15	0	0
1985	4		167	22	0	0
1986	10		200	50	0	0
1987	0		96	113	0	0
1988	27		245	98	0	0
1989	6		53	146	0	0
1990	0		89	6	0	0
1991	0		150	20	0	0
1992	121		352	187	0	0
1993	25		140	8	0	0
1994	119		239	162	4	0
1995	70		71	109	0	7
1996	63		360	24	0	0
1997	103		349	96	0	0
1998	60		239	0	0	0
1999	50		382	471	0	0
2000	50		140	342	0	0
2001	125		210	500	0	25
2002	37		155	688	0	0
2003	277	237	267	416	4	0
Averages						
80-03	56		187	158	0	2
94-03	89		232	256	1	3
2004	277	116	120	450	0	0

**Appendix D. 8.** Salmon catch in the Canadian test fishery in the Taku River, 1987-2004.

Year	Catch					
	Chinook		Sockeye	Coho	Pink	Chum
	Large	non large				
1987			237	807		
1988	72		708	422	52	222
1989	31		207	1,011	0	13
1990	48		285	472	0	0
1991	0		163	2,004	3	295
1992	0		38	1,277	0	76
1993 <sup>a</sup>	0		166	1,593	0	50
1994	There was no Canadian test fishery in 1994.					
1995	There was no Canadian test fishery in 1995.					
1996	There was no Canadian test fishery in 1996.					
1997						
1998	There was no Canadian test fishery in 1998.					
1999	577	2	88	688	0	0
2000	1,312	87	319	710	0	0
2001	1,175	229	247	31	0	0
2002	1,311	355	518	32	0	0
2003	1,403	397	27	59	0	0
Averages						
87-03			250	759	5	60
94-03		1,156	240	304	0	0
2004	294	1,489	91	3,268	0	0
additional fish released						
	Catch release					
	Chinook		Sockeye	Coho	Pink	Chum
	Large	Small				
1997			1	39		
1998						
1999	181					
2000	439					
2001	871		82	2,976		159
2002	1,132		161	3,767	7	11
2003			197	4,031	7	222
2004						

<sup>a</sup> Incomplete harvest data.

## Appendix D. 9. Taku River sockeye salmon run size, 1984-2004.

Run estimate does not include spawning escapements below the U.S./Canada border. The early season sockeye expansion is based on the proportion of fish wheel sockeye catch that occurs before the fishery opens.

Year	Above Border M-R		Expansion		Expanded		Canadian	U.S.	Total	Exploitation
	Run	Start	Method	Factor	Run	Escapce				
	Estimate	Date			Estimate					
1984	133,414	17-Jun	Ave (88-90&95-96) FW CPUE	0.056	141,254	27,292	113,962	58,543	199,796	0.430
1985	118,160	16-Jun	Ave (88-90&95-96) FW CPUE	0.047	123,974	14,411	109,563	74,729	198,703	0.430
1986	104,162	22-Jun	Ave (88-90&95-96) FW CPUE	0.095	115,045	14,939	100,106	60,934	175,980	0.431
1987	87,554	21-Jun	Ave (88-90&95-96) FW CPUE	0.088	96,023	13,887	82,136	55,154	151,178	0.457
1988	86,629	19-Jun	1988 FW CPUE	0.065	92,641	12,967	79,674	25,811	118,452	0.327
1989	99,467	18-Jun	1989 FW CPUE	0.128	114,068	18,805	95,263	63,367	177,435	0.463
1990	117,385	10-Jun	1990 CPUE	0.002	117,573	21,474	96,099	109,292	226,865	0.576
1991	153,773	9-Jun	Ave (88-90&95-96) FW CPUE	0.007	154,873	25,380	129,493	104,931	260,103	0.502
1992	162,003	21-Jun	Ave (88-90&95-96) FW CPUE	0.032	167,376	29,862	137,514	123,655	291,081	0.527
1993	138,523	13-Jun	Ave (88-90&95-96) FW CPUE	0.026	142,148	33,523	108,625	142,239	284,387	0.618
1994	129,119	12-Jun	Ave (88-90&95-96) FW CPUE	0.019	131,580	29,001	102,579	98,157	229,737	0.553
1995	145,264	11-Jun	1995 FW CPUE	0.008	146,450	32,711	113,739	91,998	238,448	0.523
1996	132,322	9-Jun	1996 FW CPUE	0.017	134,651	42,025	92,626	188,396	323,047	0.713
1997	93,816	3-May	1997 FW CPUE	0.017	95,438	24,352	71,086	79,341	174,779	0.593
1998	89,992	2-May	No Expansion		89,992	19,277	70,715	50,646	140,638	0.497
1999	113,706	14-May	No Expansion		113,706	21,151	92,555	64,581	178,287	0.481
2000	115,693	14-May	No Expansion		115,693	28,468	87,225	132,846	248,539	0.649
2001	192,245	27-May	No Expansion		192,245	48,117	144,128	208,470	400,715	0.640
2002	135,233	19-May	No Expansion		135,233	31,726	103,507	117,999	253,232	0.591
2003	193,300	20-May	No Expansion		193,300	33,024	160,366	135,402	328,792	0.512
Averages										
84-03	127,092				130,668	26,122	104,546	99,397	230,080	0.546
94-03	134,078				134,838	30,990	103,848	116,928	251,766	0.576
2004	127,047	29-Apr	None		127,047	20,359	106,688	76,968	204,015	0.477

## Appendix D. 10. Sockeye salmon escapement estimates of Taku River and Port Snettisham sockeye stocks, 1979-2004.

Spawners equals escapement to the weir minus fish collected for brood stock.

Year	Little Trapper		Little Tatumene		Tatumene		King Salmon Weir	Kuthai Lake Weir	Nahlin River Weir	Crescent Lake		Speed Lake	
	Count	Escapement	Escapement	Spawners	Escapement	Spawners				Escapement	Spawners	Escapement	Spawners
1980								1,658					
1981								2,299					
1982													
1983 <sup>a</sup>	7,402	7,402								19,422	19,422	10,484	10,484
1984	13,084	13,084								6,707	6,707	9,764	9,764
1985 <sup>a</sup>	14,889	14,889	13,093	13,093						7,249	7,249	7,073	7,006
1986	13,820	13,820	11,446	11,446						3,414	3,414	5,857	5,457
1987 <sup>a</sup>	12,007	12,007	2,794	2,794						7,839	7,839	9,319	9,319
1988	10,637	10,637	2,063	2,063					138	1,199	1,199	969	710
1989	9,606	9,606	3,039	3,039						1,109	775	12,229	10,114
1990	9,443	7,777	5,736	4,929					2,515	1,262	757	18,064	16,867
1991	22,942	21,001	8,381	7,585						9,208	8,666	299	299
1992	14,372	12,732	6,576	5,681				1,457	297	22,674	21,849	9,439	8,136
1993	17,432	16,685	5,028	4,230				6,312	2,463				
1994	13,438	12,691	4,371	3,578				5,427	960				
1995	11,524	11,524			5,780	4,387		3,310	3,711			16,208	14,260
1996	5,483	5,483			10,381	8,026		4,243	2,538			20,000	18,610
1997	5,924	5,924			8,363	5,981		5,746	1,857			4,999	
1998	8,717	8,717			5,997	4,735		1,934	345			13,358	
1999	11,805	11,805			2,104	1,888		10,042				10,277	
2000	11,551	11,551			7,575	5,570		4,096				6,764	
2001	16,860	16,860			22,575	19,579		1,663	935			8,060	
2002	7,973	7,973			5,495	4,379		7,697				5,016	
2003	31,227	31,227			4,515	2,965		7,769				7,014	
Averages													
83-03	12,864	12,710	7,239	6,327			1,185	4,975	1,576	8,008	7,788	9,221	9,252
94-03	12,450	12,727	7,938	6,535				5,193	1,724			10,188	16,435
2004	9,613	9,613			1,951	1,357		1,578	0	na	na	7,813	

<sup>a</sup> Weir count plus spawning ground survey, Trapper 1983, 1985, 1987. Minimum estimates of run size and incomplete counts are bold.

**Appendix D. 11. Taku River Chinook salmon run size, 1979-2004.**

The run estimates do not include spawning escapements below the U.S./Canada border.

Estimates are expanded if mark-recapture activities terminate prior to run completion.

Year	Above Border M-R		Confidence Intervals		Canadian Catch	Spawning Escapement	U.S. Catch	Total Run
	Run Estimate	Start Date	Lower	Upper				
Large Fish Only								
1989	41,464		29,263	51,395	1,135	40,329		
1990	53,561		33,863	70,421	1,419	52,142		
1991					1,555			
1992					1,636			
1993					1,716			
1994					2,187			
1995	35,622		23,887	43,723	1,817	33,805	2,791	38,413
1996	82,079		61,285	96,753	3,060	79,019	6,399	88,478
1997	117,514	3-May	79,878	149,998	2,576	114,938	7,214	124,728
1998	32,426	3-May	6,108	55,970	1,387	31,039	2,361	34,787
1999	18,483	3-May	11,978	27,490	1,697	16,786	3,179	21,662
2000	37,962	24-Apr	19,912	41,146	2,965	34,997	1,971	39,932
2001	49,598	28-Apr	30,285	55,675	2,954	46,644	1,965	51,563
2002	58,147	26-Apr	30,931	73,887	3,103	55,044	3,252	61,399
2003	39,766	27-Apr	25,147	54,387	3,331	36,435	2,473	42,238
Averages								
89-03	52,528				2,169	50,359	3,977	56,505
94-03	51,433				2,508	48,926	3,624	55,058
2004	77,936	27-Apr	59,757	99,221	2,904	75,032	3,986	81,922

**Appendix D. 12.** Aerial survey counts of large Taku River Chinook salmon, 1975-2004.

Year	Kowatua	Tatsatua	Dudidontu	Tseta	Nakina	Nahlin	Total Index Count without
							Tseta
1975			15		1,800	274	2,089
1976	341	620	40		3,000	725	4,726
1977	580	573	18		3,850	650	5,671
1978	490	550		21	1,620	624	3,284
1979	430	750	9		2,110	857	4,156
1980	450	905	158		4,500	1,531	7,544
1981	560	839	74	258	5,110	2,945	9,528
1982	289	387	130	228	2,533	1,246	4,585
1983	171	236	117	179	968	391	1,883
1984 <sup>ab</sup>	279	616		176	1,887	951	3,733
1985	699	848	475	303	2,647	2,236	6,905
1986	548	886	413	193	3,868	1,612	7,327
1987	570	678	287	180	2,906	1,122	5,563
1988	1,010	1,272	243	66	4,500	1,535	8,560
1989	601	1,228	204	494	5,141	1,812	8,986
1990	614	1,068	820	172	7,917	1,658	12,077
1991	570	1,164	804	224	5,610	1,781	9,929
1992	782	1,624	768	313	5,750	1,821	10,745
1993	1,584	1,491	1,020	491	6,490	2,128	12,713
1994	410	1,106	573	614	4,792	2,418	9,299
1995	550	678	731	786	3,943	2,069	7,971
1996	1,620	2,011	1,810	1,201	7,720	5,415	18,576
1997	1,360	1,148	943	648	6,095	3,655	13,201
1998	473	675	807	360	2,720	1,294	5,969
1999	561	431	527	221	1,900	532	3,951
2000	702	953	482	160	2,907	728	5,772
2001	1,050	1,024	479	202	1,552	935	5,040
2002	945	1,145	834	192	4,066	1,099	8,089
2003	850	1,000	644	436	2,126	861	5,481
Averages							
75-03	682	925	497	338	3,794	1,548	7,785
94-03	852	1,017	783	482	3,782	1,901	8,335
2004	828	1,396	1,036	906	4,091	1,787	9,138

<sup>a</sup> Partial survey. Tseta 84

<sup>b</sup> Extrapolated results. Nahlin 84



# Appendix D. 13. Taku River (above border) coho salmon run size, 1987-2004.

The run estimates do not include spawning escapements below the U.S./Canada border. Estimates are expanded if mark-recapture activities terminate prior to run completion.

Year	Above Border M-R		Expansion Method	Factor	Expanded Estimate	Canadian Catch	Escape.	U.S. Catch	Total Exploitation Run	Total Rate
	Run	End								
	Estimate	Date								
1987	43,750	20-Sep	Test Fish CPUE	1.42	61,976	6,519	55,457			
1988	43,093	18-Sep		1.00	43,093	3,643	39,450			
1989	60,841	1-Oct		1.00	60,841	4,033	56,808			
1990	75,881			1.00	75,881	3,685	72,196			
1991	132,923			1.00	132,923	5,439	127,484			
1992	50,557	5-Sep	District 111-32 CPUE	1.79	90,394	5,541	84,853	96,371	186,765	0.546
1993	62,076	11-Sep	District 111-32 CPUE	1.84	114,091	4,634	109,457	97,783	211,874	0.483
1994	98,643	24-Sep	District 111-32 CPUE	1.13	111,036	14,693	96,343	228,700	339,736	0.716
1995	61,738	30-Sep	District 111-32 CPUE	1.12	69,448	13,738	55,710	111,668	181,116	0.692
1996	44,172	28-Sep	District 111-32 CPUE	1.12	49,687	5,052	44,635	44,596	94,283	0.527
1997	35,035	27-Sep	District 111-32 CPUE	1.00	35,035	2,690	32,345	15,852	50,887	0.364
1998	49,290	26-Sep	District 111-32 CPUE	1.35	66,472	5,090	61,382	53,454	119,926	0.488
1999	59,052	3-Oct	Troll CPUE	1.12	66,343	5,575	60,768	50,833	117,176	0.481
2000	70,147	2-Oct	no expansion	1.00	70,147	5,447	64,700	39,002	109,149	0.407
2001	107,493	5-Oct	no expansion	1.00	107,493	3,099	104,394	55,286	162,779	0.359
2002	223,162	7-Oct	no expansion	1.00	223,162	3,802	219,360	80,114	303,276	0.277
2003	186,755	8-Oct	no expansion	1.00	171,562	3,643	167,919	78,334	265,089	0.309
Averages										
87-03	82,624			1.17	92,046	5,823	86,223	79,274	178,446	
94-03	93,549			1.08	97,039	6,283	90,756	75,784	174,342	0.462
2004	139,011	8-Oct	no expansion	1.00	143,970	9,432	134,538	112,524	256,494	0.475

#### Appendix D. 14. Escapement counts of Taku River coho salmon, 1984-2004.

Counts are for age-1 fish and do not include jacks. Because of variability between methods, visibility, observers, and timing, these counts are not an index of run strength.

Year	Yehring Creek		Sockeye Creek	Johnson Creek	Fish Creek	Flannigan Slough	Tatsamenie River	Hackett River	Dudidontu River	Upper Nahlin River	
	Weir	Aerial	Aerial	At Foot	Aerial	Aerial	Weir	Weir	Aerial	Aerial	Weir
1984		2,900	275	235	700	1,480					
1985		560	740	150	1,000	2,320	201	1,031			
1986	2,116 <sup>a</sup>	1,200	174	70	53	1,095	344	2,723	108	318	
1987	1,627 <sup>a</sup>	565	980	150	250	2,100	173	1,715	276	165	
1988	1,423	658	585	500	1,215	1,308	663 <sup>a</sup>	1,260	367	694	1,322
1989	1,570	600	400	400	235	1,670	712 <sup>a</sup>		115	322	
1990	2,522	220	193		425	414	669 <sup>a</sup>		25	256	
1991		475	399	120	1,378	1,348	1,101		458	176	
1992		1,267	594	654	478	1,288	730				970 <sup>a</sup>
1993		250	130	90	380	70	88				326
1994		500	60	450	200	50	168				2,112
1995		70	230	170	132	421	62				
1996		35	28	50	250	278	21				
1997		500	10	550	600						
1998		280		300	450						
1999		1,050			400						
2000		450		500	1,800						

Surveys Discontinued

<sup>a</sup> Weir count combined with spawning ground count. Tatsamenie 88-90, Yehring 86-87, Nahlin 92.

Bold-Incomplete count or initial estimates

**Appendix D. 15.** Canyon Island fish wheel salmon counts and periods of operation on the Taku River, 1983-2004.

Total counts from both fishwheels and supplemental gillnet when water is too low for fishwheels									
Year	Period of Operation	Catch					Pink		Steelhead
		Chinook	Sockeye	Coho	Pink	Chum	even year	odd year	
1984	6/15-9/18	138	2,334	889	20,751	316	20,751		
1985	6/16-9/21	184	3,601	1,207	27,670	1,376		27,670	
1986	6/14-8/25	571	5,808	758	7,256	80	7,256		
1987	6/15-9/20	285	4,307	2,240	42,786	1,533		42,786	34
1988	5/11-9/19	1,436	3,292	2,168	3,982	1,089	3,982		34
1989	5/05-10/01	1,811	5,650	2,243	31,189	645		31,189	38
1990	5/03-9/23	1,972	6,091	1,860	13,358	748	13,358		43
1991	6/08-10/15	680	5,102	4,922	23,553	1,063		23,553	138
1992	6/20-9/24	212	6,279	2,103	9,252	189	9,252		22
1993	6/12-9/29	562	8,975	2,552	1,625	345		1,625	16
1994	6/10-9/21	906	6,485	4,792	27,100	367	27,100		107
1995	5/4-9/27	1,535	6,228	2,535	1,712	218		1,712	61
1996	5/3-9/20	1,904	5,919	1,895	21,583	388	21,583		68
1997	5/3-10/1	1,321	5,708	1,665	4,962	485		4,962	103
1998	5/2-9/15	894	4,230	1,777	23,347	179	23,347		119
1999	5/3-10/3	440	4,636	1,848	23,503	164		23,503	119
2000	4/23-10/3	1,211	5,865	1,877	6,529	423	6,529		160
2001	4/23-10/5	1,262	6,201	2,380	9,134	250		9,134	125
2002	4/24-10/7	1,578	5,812	3,766	5,672	205	5,672		87
2003	4/20-10/08	1,351	5,970	3,002	15,492	268		15,492	93
Averages									
84-03		1,013	5,425	2,324	16,023	517	13,883	18,163	80
94-03		1,240	5,705	2,554	13,903	295	16,846	10,961	104
2004		2,234	6,255	3,163	8,464	414	8,464		63

**Appendix E. 1.** Weekly salmon catch and effort in the U.S. commercial fishery in the Alsek River, 2004.

Week	Start Date	Catch					Effort		
		Chinook	Sockeye	Coho	Pink	Chum	Boats	Days	Boat
								Open	Days
24	6-Jun	355	1,997	0	0	0	16	2.0	32.0
25	13-Jun	229	2,544	0	0	0	11	2.0	22.0
26	20-Jun	46	2,135	0	0	0	11	3.0	33.0
27	27-Jun	7	671	0	0	0	8	1.0	8.0
28	4-Jul	2	967	0	0	0	11	1.0	11.0
29	11-Jul	9	3,227	61	0	0	14	2.0	28.0
30	18-Jul	5	4,675	0	0	2	15	3.0	45.0
31	25-Jul	0	655	0	0	0	7	1.0	7.0
32	1-Aug	0	347	0	0	0	5	1.0	5.0
33	8-Aug	1	654	11	0	0	4	2.0	8.0
34	15-Aug	0	44	6	0	0	4	1.0	4.0
35	22-Aug	2	91	118	0	0	4	3.0	12.0
36-46	29-Aug	0	23	2,279	0	0		54.5	65.0
Total		656	18,030	2,475	0	2		76.5	280

**Appendix E. 2. Weekly salmon catch and effort in the Canadian Aboriginal and sport fisheries in the Alsek River, 2004.**

Week	Date	Chinook				Sockeye				Coho			
		Recreational		Aboriginal <sup>b</sup>	Total <sup>b</sup>	Recreational		Aboriginal	Total <sup>b</sup>	Recreational		Aboriginal	Total <sup>b</sup>
		Kept <sup>a</sup>	Released <sup>a</sup>			Kept	Released			Kept	Released		
24	6-Jun	0	0	0	0	0	0	0	0	0	0	0	0
25	13-Jun	0	0	0	0	0	0	0	0	0	0	0	0
26	20-Jun	0	0	0	0	0	0	0	0	0	0	0	0
27	27-Jun	11	0	6	17	0	0	5	5	0	0	0	0
28	4-Jul	4	2	7	11	0	3	0	0	0	0	0	0
29	11-Jul	13	5	68	81	0	5	4	4	0	0	0	0
30	18-Jul	8	0	27	35	0	9	28	28	0	0	0	0
31	25-Jul	0	0	27	27	0	0	130	130	0	0	0	0
32	1-Aug	0	0	2	2	0	0	111	111	0	0	0	0
33	8-Aug	0	0	1	1	0	0	176	176	0	0	0	0
34	15-Aug	0	0	1	1	0	0	165	165	0	0	0	0
35	22-Aug	0	0	0	0	0	0	296	296	0	0	0	0
36	29-Aug	0	0	0	0	3	0	91	94	0	0	0	0
37	5-Sep	0	0	0	0	55	2	221	276	2	0	0	2
38	12-Sep	0	0	0	0	148	8	371	519	7	0	0	7
39	19-Sep	0	0	0	0	40	7	176	216	23	0	0	23
40	26-Sep	0	0	0	0	0	0	101	101	25	0	0	25
41	3-Oct	0	0	0	0	0	0	0	0	50	3	0	50
42	10-Oct	0	0	0	0	0	0	0	0	20	0	0	20
43	17-Oct	0	0	0	0	0	0	0	0	0	0	0	0
44	24-Oct	0	0	0	0	0	0	0	0	0	0	0	0
45	31-Oct	0	0	0	0	0	0	0	0	0	0	0	0
46	7-Nov	0	0	0	0	0	0	0	0	0	0	0	0
Sum		36	7	139	175	247	34	1,875	2,122	127	3	0	127
Commercial Recr.		10	40		10	0	0		0	0	0		0
Total		46	47	139	185	247	34	1,875	2,122	127	3	0	127
Village Creek food fish				3				230				0	
Harvest at Klukshu River weir				12				375				0	
Food fish above Klukshu Weir				68				1,252				0	

<sup>a</sup> Includes estimates of sport catch (kept and released) in Takhanne and Blanchard rivers; estimates based on salmon catch card information.

<sup>b</sup> Does not include released recreational or aboriginal fish.

### Appendix E. 3. Daily counts of salmon passing through Klukshu weir, 2004.

Includes all Chinook

Date	Chinook			Sockeye			Coho		
	Daily	Cumulative		Daily	Cumulative		Daily	Cumulative	
		Daily	Prop.		Daily	Prop.		Daily	Prop.
5-Jun	1	1	0.000	0	0	0.000	0	0	0.000
6-Jun	0	1	0.000	0	0	0.000	0	0	0.000
7-Jun	0	1	0.000	0	0	0.000	0	0	0.000
8-Jun	0	1	0.000	0	0	0.000	0	0	0.000
9-Jun	0	1	0.000	0	0	0.000	0	0	0.000
10-Jun	0	1	0.000	0	0	0.000	0	0	0.000
11-Jun	0	1	0.000	0	0	0.000	0	0	0.000
12-Jun	1	2	0.001	0	0	0.000	0	0	0.000
13-Jun	0	2	0.001	0	0	0.000	0	0	0.000
14-Jun	0	2	0.001	0	0	0.000	0	0	0.000
15-Jun	1	3	0.001	0	0	0.000	0	0	0.000
16-Jun	2	5	0.002	2	2	0.000	0	0	0.000
17-Jun	1	6	0.002	0	2	0.000	0	0	0.000
18-Jun	2	8	0.003	0	2	0.000	0	0	0.000
19-Jun	2	10	0.004	0	2	0.000	0	0	0.000
20-Jun	1	11	0.004	1	3	0.000	0	0	0.000
21-Jun	2	13	0.005	1	4	0.000	0	0	0.000
22-Jun	3	16	0.006	0	4	0.000	0	0	0.000
23-Jun	3	19	0.008	0	4	0.000	0	0	0.000
24-Jun	4	23	0.009	3	7	0.000	0	0	0.000
25-Jun	2	25	0.010	2	9	0.001	0	0	0.000
26-Jun	5	30	0.012	1	10	0.001	0	0	0.000
27-Jun	2	32	0.013	5	15	0.001	0	0	0.000
28-Jun	6	38	0.015	3	18	0.001	0	0	0.000
29-Jun	6	44	0.017	4	22	0.001	0	0	0.000
30-Jun	6	50	0.020	1	23	0.001	0	0	0.000
1-Jul	9	59	0.023	2	25	0.002	0	0	0.000
2-Jul	6	65	0.026	7	32	0.002	0	0	0.000
3-Jul	15	80	0.032	4	36	0.002	0	0	0.000
4-Jul	11	91	0.036	5	41	0.003	0	0	0.000
5-Jul	27	118	0.047	5	46	0.003	0	0	0.000
6-Jul	20	138	0.055	3	49	0.003	0	0	0.000
7-Jul	5	143	0.057	3	52	0.003	0	0	0.000
8-Jul	60	203	0.080	56	108	0.007	0	0	0.000
9-Jul	114	317	0.126	109	217	0.014	0	0	0.000
10-Jul	17	334	0.132	5	222	0.014	0	0	0.000
11-Jul	110	444	0.176	0	222	0.014	0	0	0.000
12-Jul	108	552	0.219	28	250	0.016	0	0	0.000
13-Jul	112	664	0.263	33	283	0.018	0	0	0.000
14-Jul	562	1,226	0.486	112	395	0.026	0	0	0.000
15-Jul	41	1,267	0.502	44	439	0.029	0	0	0.000
16-Jul	57	1,324	0.524	45	484	0.032	0	0	0.000
17-Jul	92	1,416	0.561	47	531	0.035	0	0	0.000
18-Jul	155	1,571	0.622	66	597	0.039	0	0	0.000
19-Jul	57	1,628	0.645	26	623	0.041	0	0	0.000
20-Jul	42	1,670	0.661	45	668	0.044	0	0	0.000
21-Jul	40	1,710	0.677	26	694	0.045	0	0	0.000
22-Jul	72	1,782	0.706	9	703	0.046	0	0	0.000
23-Jul	88	1,870	0.741	82	785	0.051	0	0	0.000
24-Jul	40	1,910	0.756	85	870	0.057	0	0	0.000
25-Jul	77	1,987	0.787	29	899	0.059	0	0	0.000
26-Jul	35	2,022	0.801	49	948	0.062	0	0	0.000
27-Jul	52	2,074	0.821	16	964	0.063	0	0	0.000
28-Jul	30	2,104	0.833	144	1,108	0.072	0	0	0.000
29-Jul	67	2,171	0.860	38	1,146	0.075	0	0	0.000
30-Jul	27	2,198	0.870	70	1,216	0.079	0	0	0.000
31-Jul	51	2,249	0.891	34	1,250	0.081	0	0	0.000
1-Aug	44	2,293	0.908	83	1,333	0.087	0	0	0.000
2-Aug	18	2,311	0.915	63	1,396	0.091	0	0	0.000
3-Aug	57	2,368	0.938	118	1,514	0.099	0	0	0.000
4-Aug	63	2,431	0.963	567	2,081	0.136	0	0	0.000



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Date	Chinook			Sockeye			Coho		
	Daily	Cumulative		Daily	Cumulative		Daily	Cumulative	
		Daily	Prop.		Daily	Prop.		Daily	Prop.
5-Aug	25	2,156	0.973	151	2,232	0.145	0	0	0.000
6-Aug	19	2,475	0.980	41	2,273	0.148	0	0	0.000
7-Aug	5	2,480	0.982	69	2,342	0.153	0	0	0.000
8-Aug	4	2,484	0.984	76	2,418	0.158	0	0	0.000
9-Aug	3	2,487	0.985	95	2,513	0.164	0	0	0.000
10-Aug	1	2,488	0.985	64	2,577	0.168	0	0	0.000
11-Aug	5	2,493	0.987	102	2,679	0.175	0	0	0.000
12-Aug	6	2,499	0.990	34	2,713	0.177	0	0	0.000
13-Aug	3	2,502	0.991	111	2,824	0.184	0	0	0.000
14-Aug	1	2,503	0.991	544	3,368	0.219	0	0	0.000
15-Aug	5	2,508	0.993	96	3,464	0.226	0	0	0.000
16-Aug	4	2,512	0.995	108	3,572	0.233	0	0	0.000
17-Aug	0	2,512	0.995	316	3,888	0.253	0	0	0.000
18-Aug	3	2,515	0.996	158	4,046	0.264	0	0	0.000
19-Aug	2	2,517	0.997	221	4,267	0.278	0	0	0.000
20-Aug	2	2,519	0.998	77	4,344	0.283	0	0	0.000
21-Aug	0	2,519	0.998	187	4,531	0.295	0	0	0.000
22-Aug	1	2,520	0.998	55	4,586	0.299	0	0	0.000
23-Aug	0	2,520	0.998	102	4,688	0.305	0	0	0.000
24-Aug	0	2,520	0.998	312	5,000	0.326	0	0	0.000
25-Aug	0	2,520	0.998	146	5,146	0.335	0	0	0.000
26-Aug	0	2,520	0.998	12	5,158	0.336	0	0	0.000
27-Aug	0	2,520	0.998	100	5,258	0.343	0	0	0.000
28-Aug	0	2,520	0.998	186	5,444	0.355	0	0	0.000
29-Aug	1	2,521	0.998	122	5,566	0.363	0	0	0.000
30-Aug	0	2,521	0.998	43	5,609	0.365	0	0	0.000
31-Aug	2	2,523	0.999	13	5,622	0.366	0	0	0.000
1-Sep	0	2,523	0.999	952	6,574	0.428	0	0	0.000
2-Sep	1	2,524	1.000	194	6,768	0.441	0	0	0.000
3-Sep	0	2,524	1.000	1,637	8,405	0.548	0	0	0.000
4-Sep	0	2,524	1.000	60	8,465	0.552	0	0	0.000
5-Sep	0	2,524	1.000	438	8,903	0.580	0	0	0.000
6-Sep	1	2,525	1.000	850	9,753	0.635	0	0	0.000
7-Sep	0	2,525	1.000	417	10,170	0.663	0	0	0.000
8-Sep	0	2,525	1.000	1,077	11,247	0.733	0	0	0.000
9-Sep	0	2,525	1.000	208	11,455	0.746	0	0	0.000
10-Sep	0	2,525	1.000	48	11,503	0.749	0	0	0.000
11-Sep	0	2,525	1.000	379	11,882	0.774	0	0	0.000
12-Sep	0	2,525	1.000	22	11,904	0.776	0	0	0.000
13-Sep	0	2,525	1.000	861	12,765	0.832	0	0	0.000
14-Sep	0	2,525	1.000	118	12,883	0.839	0	0	0.000
15-Sep	0	2,525	1.000	234	13,117	0.855	0	0	0.000
16-Sep	0	2,525	1.000	7	13,124	0.855	0	0	0.000
17-Sep	0	2,525	1.000	13	13,137	0.856	0	0	0.000
18-Sep	0	2,525	1.000	33	13,170	0.858	0	0	0.000
19-Sep	0	2,525	1.000	12	13,182	0.859	1	1	0.001
20-Sep	0	2,525	1.000	80	13,262	0.864	1	2	0.003
21-Sep	0	2,525	1.000	92	13,354	0.870	11	13	0.017
22-Sep	0	2,525	1.000	138	13,492	0.879	1	14	0.019
23-Sep	0	2,525	1.000	737	14,229	0.927	22	36	0.048
24-Sep	0	2,525	1.000	41	14,270	0.930	7	43	0.057
25-Sep	0	2,525	1.000	0	14,270	0.930	0	43	0.057
26-Sep	0	2,525	1.000	23	14,293	0.931	2	45	0.060
27-Sep	0	2,525	1.000	488	14,781	0.963	72	117	0.156
28-Sep	0	2,525	1.000	60	14,841	0.967	46	163	0.217
29-Sep	0	2,525	1.000	5	14,846	0.967	14	177	0.236
30-Sep	0	2,525	1.000	0	14,846	0.967	14	191	0.255
1-Oct	0	2,525	1.000	10	14,856	0.968	16	207	0.276
2-Oct	0	2,525	1.000	10	14,866	0.969	9	216	0.288
3-Oct	0	2,525	1.000	43	14,909	0.971	25	241	0.321
4-Oct	0	2,525	1.000	32	14,941	0.973	38	279	0.372
5-Oct	0	2,525	1.000	27	14,968	0.975	36	315	0.420
6-Oct	0	2,525	1.000	6	14,974	0.976	19	334	0.445
7-Oct	0	2,525	1.000	30	15,004	0.978	20	354	0.472
8-Oct	0	2,525	1.000	19	15,023	0.979	29	383	0.511
9-Oct	0	2,525	1.000	17	15,040	0.980	26	409	0.545
10-Oct	0	2,525	1.000	78	15,118	0.985	52	461	0.615
11-Oct	0	2,525	1.000	23	15,141	0.987	58	519	0.692
12-Oct	0	2,525	1.000	207	15,348	1.000	231	750	1.000
Total Count		2,525			15,348			750	
Catch at weir		12			375			0	
Catch above weir		68			1,252			0	
Total Escapement		2,445			13,721			750	

**Appendix E. 4. Salmon catch and effort in the U.S. commercial fishery in the Alsek River, 1960-2004.**

Year	Catch					Effort	
	Chinook	Sockeye	Coho	Pink	Chum	Boat Days	Days Open
1960							
1961	2,120	23,339	7,679	84	86	1,436	80.0
1962							
1963	131	6,055	7,164	42	34	692	68.0
1964	591	14,127	9,760	144	367	592	68.0
1965	719	28,487	9,638	10	72	1,016	72.0
1966	934	29,091	2,688	22	240	500	64.0
1967	225	11,108	10,090	107	30	600	68.0
1968	215	26,918	10,586	82	240	664	68.0
1969	685	29,259	2,493	38	61	807	61.0
1970	1,128	22,654	2,188	6	26	670	52.3
1971	1,222	25,314	4,730	3	120	794	60.5
1972	1,827	18,717	7,296	37	280	640	65.0
1973	1,757	26,523	4,395	26	283	894	52.0
1974	1,162	16,747	7,046	13	107	699	46.0
1975	1,379	13,842	2,230	16	261	738	58.0
1976	512	19,741	4,883	0	368	550	58.5
1977	1,402	40,780	11,817	689	483	882	57.0
1978	2,441	50,580	13,913	59	233	929	57.0
1979	2,525	41,449	6,158	142	263	1,110	51.0
1980	1,382	25,522	7,863	21	1,005	773	42.0
1981	779	23,641	10,232	65	816	588	40.0
1982	532	27,443	6,534	6	358	552	33.0
1983	94	18,293	5,253	20	432	487	38.0
1984	60	14,326	7,868	24	1,610	429	33.0
1985	213	5,792	5,490	3	427	277	33.0
1986	481	24,791	1,344	13	462	517	34.0
1987	347	11,393	2,517	0	1,924	388	40.5
1988	223	6,286	4,986	7	908	324	34.0
1989	228	13,513	5,972	2	1,031	378	38.0
1990	78	17,013	1,437	0	495	374	38.0
1991	103	17,542	5,956	0	105	530	49.0
1992	301	19,298	3,116	1	120	372	46.0
1993	300	20,043	1,215	0	49	372	40.0
1994	805	19,639	4,182	0	32	403	61.0
1995	670	33,112	14,184	13	347	879	53.5
1996	772	15,182	5,514	0	165	419	51.0
1997	568	25,879	11,427	0	34	611	59.0
1998	550	15,007	4,925	1	145	358	41.0
1999	482	11,441	5,660	0	112	319	44.0
2000	677	9,522	5,103	5	130	307	37.0
2001	541	13,995	2,909	8	17	234	50.0
2002	700	16,918	9,525	0	1	270	73.0
2003	937	39,698	47	0	0	271	60.0
Averages							
60-03	781	21,191	6,143	41	340	587	51.8
94-03	670	20,039	6,348	3	98	407	53
2004	656	18,030	2,475	0	2	280	76.5

**Appendix E. 5.** Salmon catches in the U.S. subsistence and personal use fisheries in the Alsek River, 1976-2004.

Catches are those reported on returned permits			
Year	Catch		
	Chinook	Sockeye	Coho
1976	13	51	5
1977	18	113	0
1978			
1979	80	35	70
1980	57	41	62
1981	32	50	74
1982	87	75	50
1983	31	25	50
1984			
1985	16	95	0
1986	22	241	45
1987	27	173	31
1988	13	148	9
1989	20	131	34
1990	85	144	12
1991	38	104	0
1992	15	37	44
1993	38	96	28
1994	60	47	20
1995	51	167	53
1996	60	67	28
1997	38	273	26
1998	63	158	42
1999	44	152	21
2000	73	146	31
2001	19	72	45
2002	60	232	35
2003	24	176	27
Averages			
76-03	42	117	32
94-03	49	149	33
2004	51	224	21

**Appendix E. 6.** Salmon catches in the Canadian Aboriginal and sport fisheries in the Alsek River, 1976-2004.

Year	Chinook			Sockeye			Coho		
	Aboriginal	recreational	Total	Aboriginal	recreational	Total	Aboriginal	recreational	Total
1976	150	200	350	4,000	600	4,600	0	100	100
1977	350	300	650	10,000	500	10,500	0	200	200
1978	350	300	650	8,000	500	8,500	0	200	200
1979	1,300	650	1,950	7,000	750	7,750	0	100	100
1980	150	200	350	800	600	1,400	0	200	200
1981	150	315	465	2,000	808	2,808	0	109	109
1982	400	224	624	5,000	755	5,755	0	109	109
1983	300	312	612	2,550	732	3,282	0	16	16
1984	100	475	575	2,600	289	2,889	0	20	20
1985	175	250	425	1,361	100	1,461	50	100	150
1986	102	165	267	1,914	307	2,221	0	9	9
1987	125	367	492	1,158	383	1,541	0	49	49
1988	43	249	292	1,604	322	1,926	0	192	192
1989	234	272	506	1,851	319	2,170	0	227	227
1990	202	555	757	2,314	392	2,706	0	75	75
1991	509	388	897	2,111	303	2,414	0	227	227
1992	148	103	251	2,592	582	3,174	0	213	213
1993	152	171	323	2,361	329	2,690	0	37	37
1994	289	197	486	1,745	261	2,006	8	69	77
1995	580	1,044	1,624	1,745	682	2,427	83	527	610
1996	448	650	1,098	1,204	157	1,361	56	9	65
1997	232	298	530	484	36	520	5	0	5
1998	171	175	346	567	18	585	72	40	112
1999	238	174	412	554	0	554	0	28	28
2000	65	77	142	745	0	745	51	1	52
2001	120	157	277	1,173	4	1,177	5	94	99
2002	120	197	317	2,194	61	2,255	6	283	289
2003	90	138	228	2,734	61	2,795	0	192	192
Averages									
76-03	260	307	568	2,584	352	2,936	12	122	134
94-03	235	311	546	1,315	128	1,443	29	124	153
2004	139	77	216	1,875	162	2,037	0	95	95

**Appendix E. 7. Klukshu River weir counts of Chinook, sockeye, and coho salmon, 1976-2004.**

The escapement count equals the weir count minus the aboriginal fishery catch above the weir and broodstock taken.

Year	All Chinook			Sockeye		Coho <sup>a</sup>		
	Count	Escape. <sup>c</sup>	Early <sup>c</sup>	Late	Total	Escape.	Count	Escape. <sup>b</sup>
1976	1,278	1,153	181	11,510	11,691	7,941	1,572	
1977	3,144	2,894	8,931	17,860	26,791	15,441	2,758	
1978	2,976	2,676	2,508	24,359	26,867	19,017	30	
1979	4,404	2,454	977	11,334	12,311	7,051	175	
1980	2,637	2,487	1,008	10,742	11,750	10,850	704	
1981	2,113	1,963	997	19,351	20,348	18,448	1,170	
1982	2,369	1,969	7,758	25,941	33,699	28,899	189	
1983	2,537	2,237	6,047	14,445	20,492	18,017	303	
1984	1,672	1,572	2,769	9,958	12,727	10,227	1,402	
1985	1,458	1,283	539	18,081	18,620	17,259	350	
1986	2,709	2,607	416	24,434	24,850	22,936	71	
1987	2,616	2,491	3,269	7,235	10,504	9,346	202	
1988	2,037	1,994	585	8,756	9,341	7,737	2,774	
1989	2,456	2,289	3,400	20,142	23,542	21,636	2,219	
1990	1,915	1,742	1,316	24,679	25,995	24,607	315	
1991	2,489	2,248	1,924	17,053	18,977	17,645	8,540	8,478
1992	1,367	1,242	11,339	8,428	19,767	18,269	1,145	1,145
1993	3,302	3,220	5,369	11,371	16,740	14,921	788	788
1994	3,727	3,628	3,247	11,791	15,038	13,892	1,232	1,232
1995	5,678	5,394	2,289	18,407	20,696	19,817	3,614	3,564
1996	3,599	3,382	1,502	6,818	8,320	7,891	3,465	3,465
1997	2,989	2,829	6,565	4,931	11,496	11,303	307	302
1998	1,364	1,347	597	12,994	13,591	13,580	1,961	1,961
1999	2,193	2,168	371	5,010	5,381	5,101	2,531	2,531
2000	1,365	1,321	237	5,314	5,551	5,422	4,832	4,791
2001	1,825	1,738	908	9,382	10,290	9,329	748	746
2002	2,240	2,134	11,904	13,807	25,711	23,587	9,921	9,921
2003	1,737	1,661	3,084	31,278	34,362	32,120	3,689	3,689
Averages								
76-03	2,507	2,290	3,216	14,479	17,695	15,439	2,033	
94-03	2,672	2,560	3,070	11,973	15,044	14,204	3,221	3,220
2004	2,525	2,445	3,464	11,884	15,348	13,721	750	750

<sup>a</sup> Weir was removed prior to the end of the coho run.

<sup>b</sup> The chinook and sockeye escapements into Klukshu Lake are calculated from the weir count minus fish harvested above the weir site minus broodstock taken. The remainder of the food fishery harvest occurred below the weir, at Village Creek, and Blanchard and Takhanne Rivers.

<sup>c</sup> Includes sockeye counts up to and including August 15.



**Appendix E. 8.** Alsek River sockeye escapement 200-2004. Estimates are based on a mark-recapture study.

The estimates are based on a mark-recapture study.

Year	Inriver Run Estimate	Confidence Interval Lower	Confidence Interval Upper	Canadian Catch	Spawning Escapement	U.S. Catch	Total Run	Percent Klukshu
2000	37,887	23,410	52,365	745	37,142	9,668	47,555	14.7%
2001	31,164	23,143	39,185	1,177	29,987	14,067	45,231	33.0%
2002	95,427	55,893	134,961	2,255	93,172	17,150	112,577	26.9%
2003	103,507	74,350	132,664	2,795	100,712	39,874	143,381	33.2%
2004	83,703	39,566	127,841	2,122	81,581	18,152	101,855	18.3%

**Appendix E. 9.** Alsek River sockeye counts from U.S. and Canadian aerial surveys, and from the electronic counter at Village Creek, 1985-2004.

Year	U.S. Aerial Surveys <sup>a</sup>				Canada Aerial Surveys <sup>b</sup>		Village Creek Counter
	Basin Creek	Cabin Creek	Muddy Creek	Tanis River	Tatshenshini River	Jeskataheen Lake	
1985	2,600			2,200			
1986	100		300	2,700	536	750	1,490
1987	350	220		1,600			1,875
1988	500			750	433	456	<b>433</b>
1989	320			680	1,689	1,700	9,569
1990	275	300		3,500			<b>5,313</b>
1991				800			<b>86</b>
1992	1,000	10		50			<b>7,447</b>
1993	4,800			900			<b>2,104</b>
1994	250			600	366		<b>3,921</b>
1995	2,700			350			4,042
1996	325			650			1,583
1997	600			350			2,267
1998				130			826
1999	30			800			<b>NA</b>
2000	25			180			1,860
2001				700			<b>1,897</b>
2002		No surveys flown					2,765
2003		No surveys flown					<b>2,778</b>
Averages							
85-03							2,956
94-03							2,438
2004		No surveys flown					<b>1,968</b>

<sup>a</sup> Includes several streams from Lo-Fog to Goat Creek.

Bold are incomplete counts

**Appendix E. 10.** Aerial survey index counts of Alsek Chinook salmon escapements, 1984-2004.

Year	Blanchard River	Takhanne River	Goat Creek
1984	304	158	28
1985	232	184	
1986	556	358	142
1987	624	395	85
1988	437	169	54
1989	No Survey -Poor Cond.	158	34
1990	No Survey -Poor Cond.	325	32
1991	121	86	63
1992	86	77	16
1993	326	351	50
1994	349	342	67 <sup>a</sup>
1995	338	260	
1996	132	230	12
1997	109	190	
1998	71	136	39
1999	371	194	51
2000	163	152	33
2001	543	287	21
2002	351	220	86
2003	127	105	10
Averages			
84-03	291	219	48
94-03	255	212	40
2004	84	46	no survey

<sup>a</sup> Late survey date which missed the peak of spawning.

# Appendix E. 11. Alsek River run of large ( $\geq 600$ mm mcf) Chinook salmon, 1997-2004

Estimates are based on a mark-recapture study and include the percent of Chinook salmon spawning in Klukshu River.

Kluksno River.									
Year	Inriver Run			U.S. Catch		Total Inriver Run	Canadian Catch		
	Past	Confidence Interval		Dry Bay			Aboriginal	Sport	Escapement
	Dry Bay	Lower	Upper	Commercial/subsistence					
1997	15,250	9,081	21,418	568	38	15,856	232	298	14,720
1998	4,967	3,027	9,765	550	63	5,580	171	175	4,621
1999	11,969	8,243	22,035	482	44	12,495	238	174	11,557
2000	8,432	6,805	14,308	677	73	9,182	65	77	8,290
2001	11,246	9,146	14,303	541	19	11,806	120	157	10,969
2002	8,807	8,345	10,790	700	60	9,567	120	197	8,490
2003	5,105	4,302	6,310	937	24	6,066	90	138	4,877
Averages									
97-04	9,168			639	45	9,851	147	158	8,863
2004	7,565			656	38	8,259	139	46	7,380

Klukshu weir count of large chinook salmon as a percent of the Alsek escapement of large chinook salmon

	Weir Count		Percent Klukshu
	All	Large	
1997	2,989	2,864	19.5%
1998	1,364	1,184	25.6%
1999	2,193	1,663	14.4%
2000	1,365	1,218	14.7%
2001	1,825	1,538	14.0%
2002	2,240	2,067	24.3%
2003	1,737	1,313	26.9%
Averages			
97-04	2,030	1,778	21.5%
2004	2,525	2,376	32.2%

# Appendix E. 12. Aerial survey counts of coho salmon from U.S. lower Alsek River tributaries, 1985-2004.

Year	Combined U.S. Tributary Counts	
1985		450
1986		1,100
1987		100
1988		1,900
1989		1,990
1990		1,600
1991		500 <sup>a</sup>
1992		1010 <sup>a</sup>
1993		800 <sup>a</sup>
1994		975 <sup>a</sup>
1995		1,050
1996		1,550
1997	No surveys due to poor weather conditions	
1998		500
1999	No surveys due to poor weather conditions	
2000		620
Averages		
85-00		1,010

**Appendix F. 1. Tahltan Lake egg collection, fry plants, and survivals, 1989-2004.**

Number for eggs and fry are millions. Eggs collected from Tahltan broodstock are used for outplants to both Tahltan and Tuya Lakes.

Brood Year	Egg Take		Designated Tahltan	Fry Planted	Percent Fertilized	Survival		Thermal Mark Pattern
	Target	Collected <sup>a</sup>				Fertilized Egg to Fry	Green Egg to Fry	
1989 <sup>a</sup>	3,000	2,955	2,955	1,042	0.704	0.501	0.353	1:1.4
1990	5,000	4,511	4,511	3,585	0.824	0.964	0.795	1:1.3
1991	5,000	4,246	1,514	1,415	0.949	0.984	0.935	1:1.4
1992	5,400	4,901	2,154	1,947	0.919	0.983	0.904	1:1.5+2.3
1993	6,000	6,140	0,969	0,904	0.946	0.986	0.933	1:1.6+2.5N
1994	6,000	4,183	1,418	1,143	0.929	0.868	0.806	1:1.6
1995	6,000	6,891	3,008	2,296	0.906	0.843	0.763	1:1.7
1996	6,000	6,402	3,169	2,313	0.923	0.791	0.730	1:1.6
1997	6,000	3,221	2,700	1,900	0.812	0.867	0.704	2:1.6
1998	6,000	4,022	1,998	1,671	0.911	0.918	0.836	1:1.7
1999	6,000	3,505	2,773	2,228	0.901	0.892	0.803	2:1.6
2000	6,000	2,388	2,388	1,873	0.920	0.853	0.784	1:1.7
2001	6,000	3,306	3,306	2,533	0.829	0.924	0.766	2:1.6
2002	6,000	4,050	2,780	2,623	0.926	1.019	0.944	1:1.7
2003	6,000	5,391	2,661	2,226	0.899	0.931	0.837	1:1.6 & 1:1.5+2.4
Averages								
89-03	5,627	4,427	2,488	1,878	0.866	0.895	0.769	
94-03	6,000	4,336	2,620	2,081	0.896	0.890	0.797	
2004	6,000	5,701	1,966	1,266	0.803	0.802	0.644	1:1.6+2.6

**Appendix F. 2. Tuya Lake fry plants and survivals, 1991-2004.**

Numbers for eggs and fry are millions

Brood Year	Egg Take		Fry Planted	Percent Fertilized	Survival		Thermal Mark Pattern
	Designated Tuya				Fertilized Egg to Fry	Green Egg to Fry	
1991	2,732	1,632	0.944		0.633	0.597	1:1.6
1992	2,747	1,990	0.929		0.780	0.724	1:1.7
1993	5,171	4,691	0.911		0.996	0.907	1:1.4+2.5N
1994	2,765	2,267	0.870		0.943	0.820	1:1.4
1995	3,883	2,474	0.795		0.802	0.637	1:1.4+2.4
1996	3,233	2,614	0.932		0.868	0.809	1:1.4
1997	0,521	0,433	0.911		0.912	0.831	2:1.4
1998	2,024	1,603	0.917		0.864	0.792	1:1.4
1999	1,053	0,867	0.960		0.858	0.823	2:1.4
2000 <sup>a</sup>	0,000	0,000					
2001 <sup>a</sup>	0,000	0,000					
2002	1,271	1,124	0.904		0.978	0.884	1:1.7+2.3
2003	2,730	2,445	0.927		0.966	0.896	1:1.4
Average							
94-03	1,748	1,383	0.902		0.899	0.811	
2004	3,734	3,201	0.921		0.931	0.857	1:1.6+2.4

<sup>a</sup> All eggs collected in 2000 and 2001 were for backplant into Tahltan Lake.

### Appendix F. 3. Tatsamenie Lake egg collection, fry plants, and survivals, 1989-2004.

Brood Year	Egg Take			Fry Planted	Percent Fertilized	Survival <sup>b</sup>		Thermal Mark Pattern	Last Date Released
	Target	Collected <sup>a</sup>	Transport			Fertilized Egg to Fry	Green Egg to Fry		
1990	2,500	0,985	0,985	0,673	0,775	0,882	0,683	1:1.3	22-Jun
1991	1,500	1,360	1,360	1,232	0,927	0,977	0,906	2:1.4	26-Jun
1992	1,750	1,486	1,486	0,909	0,858	0,713	0,612	1:1.5	14-Jul
1993	2,500	1,144	1,144	0,521	0,619	0,735	0,455	2:1.5	14-Jul
1994	2,500	1,229	1,229	0,898	0,801	0,912	0,731	1:1.5	21-Jul
1995	2,500	2,407	2,407	1,724	0,843	0,850	0,716	1:1.5	25-Jun
1996	5,000	4,934	4,934	3,945	0,849	0,942	0,800	1:1.5&1:1.5,2.3	27-Jun
1997	5,000	4,651	4,651	3,597	0,910	0,850	0,773	2:1&2:1.5,2.3	9-Jul
1998	2,500	2,414	2,414	1,769	0,897	0,817	0,733	1:1.4+2.5&1:1.4+2.3	30-Jun
1999	2,500	0,461	0,461	0,350	0,922	0,824	0,759	2:1.5	4-Jul
2000	3,000	2,816	2,572	2,320	0,943	0,956	0,902	1:1.5+2.3&1:1.5	26-Jun
2001	4,800	4,364	3,499	2,233	0,900	0,709	0,638	2:1.5&2:1.5,2.3	25-Jun
2002	3,000	2,498	2,302	1,353	0,823	0,714	0,588	1:1.4&1:1.4+2.3	27-May
2003	5,000	2,642	2,452	2,141	0,919	0,950	0,873	1:1.5+2.3&1:1.5	27-May
Averages									
90-03	3,146	2,385	2,278	1,690	0,856	0,845	0,726		27-Jun
94-03	3,580	2,842	2,692	2,033	0,881	0,852	0,751		22-Jun
2004	5,000	0,750	0,750	0,628	0,933	0,898	0,837	1:1.4+2.5n&1:1.4+2.3,3.3	20-May

#### Multiple Release Treatments

Brood Year	Mark	Treatment 1			Treatment 2		
		Treatment	Number Released	Last Date Released	Mark	Treatment	Number Released
1996	1:1.5	onshore	3,441	27-Jun	1:1.5,2.3	onshore	0,500
1997	2:1.5	onshore	3,202	29-Jun	2:1.5,2.3	fed at lake	0,394
1998	1:1.4+2.5	unfed	0,751	9-Jun	1:1.4+2.3	fed at lake	1,018
1999	2:1.5	fed at lake	0,350	4-Jul			
2000	1:1.5+2.3	fed early	1,265	15-Jun	1:1.5	fed late	1,054
2001	2:1.5	unfed early	0,727	30-May	2:1.5,2.3	fed	1,432
2002	1:1.4	direct release early	0,911	27-May	1:1.4+2.3	fed - IHN loss	0,000
2003	1:1.5+2.3	unfed early south	1,005	27-May	1:1.5	unfed early north	1,136
Average							
96-03			1,457				0,759
2004	1:1.4+2.5N	unfed early south	0,367	20-May	1:1.4+2.3,3.3	unfed early north	0,261

<sup>a</sup> Eggs not transported but placed in inlake incubator; 2000 = 244,000, 2001 = 865,000, 2002 196,000, 2003 = 190,000.

<sup>b</sup> Survival rates are for hatchery eggs and hatchery fry plants and do not include the lake incubators.

<sup>c</sup> All died to IHN